Office Management
and AMERICAN BUSINESS

The Magazine of Administration and Systems - May 1960

"OFFICE OF THE YEAR" ISSUE

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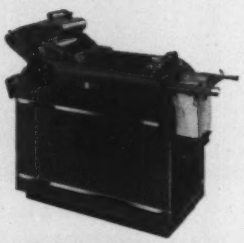

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Office Management
and AMERICAN BUSINESS

Office Management established 1940; *American Business* established 1930. This publication incorporates *System* magazine, founded in 1900, and *Business Equipment Topics*, founded in 1905.

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Once again we present with pride the six offices constructed during the preceding year which have been judged outstanding. This year two Southern offices—one in Texas, one in Louisiana—take top honors. Stories on the award-winning offices begin on page 34.

MAY, 1960
Volume XXI, Number 5

Are you guilty of these common administrative faults?
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Place: Park-Sheraton Hotel.

Western Joint Computer Conference. San Francisco, May 3-5.
Place: Jack Tar Hotel.

U.S. World Trade Fair, New York, May 4-14.
Place: New York Coliseum.

CIA Eastern Regional Conference. Pocono Manor, Pennsylvania, May 8-10.
Sponsor: Controllers Institute of America.
Place: Pocono Manor Hotel.

ISA Instrument-Automation Conference and Exhibit. San Francisco, May 9-12.
Sponsor: Instrument Society of America.
Place: Civic Auditorium and Brooks Hall.

ASPA 12th Annual Conference. New York, May 15-18.
Sponsor: American Society for Personnel Administration.
Place: Statler Hilton Hotel.

NISA 38th Conference and Business Show. Chicago, May 15-18.
Sponsor: Insurance Accounting and Statistical Association.
Place: The Sherman Hotel.

NSBB Annual Conference. Cincinnati, May 19-20.
Sponsor: National Society for Business Budgeting.
Place: Netherland Hilton Hotel.

NOMA 41st International Office Conference and Exposition, Montreal, May 22-26.
Sponsor: National Office Management Association.
Place: Queen Elizabeth Hotel and Show-Mart.

Canadian National Business Show, Toronto, June 6-8.
Sponsor: Canadian Business Equipment Manufacturers Association, Inc.
Place: Automotive Building, Exhibition Park.

NMAA National Conference, San Francisco, June 22-24.
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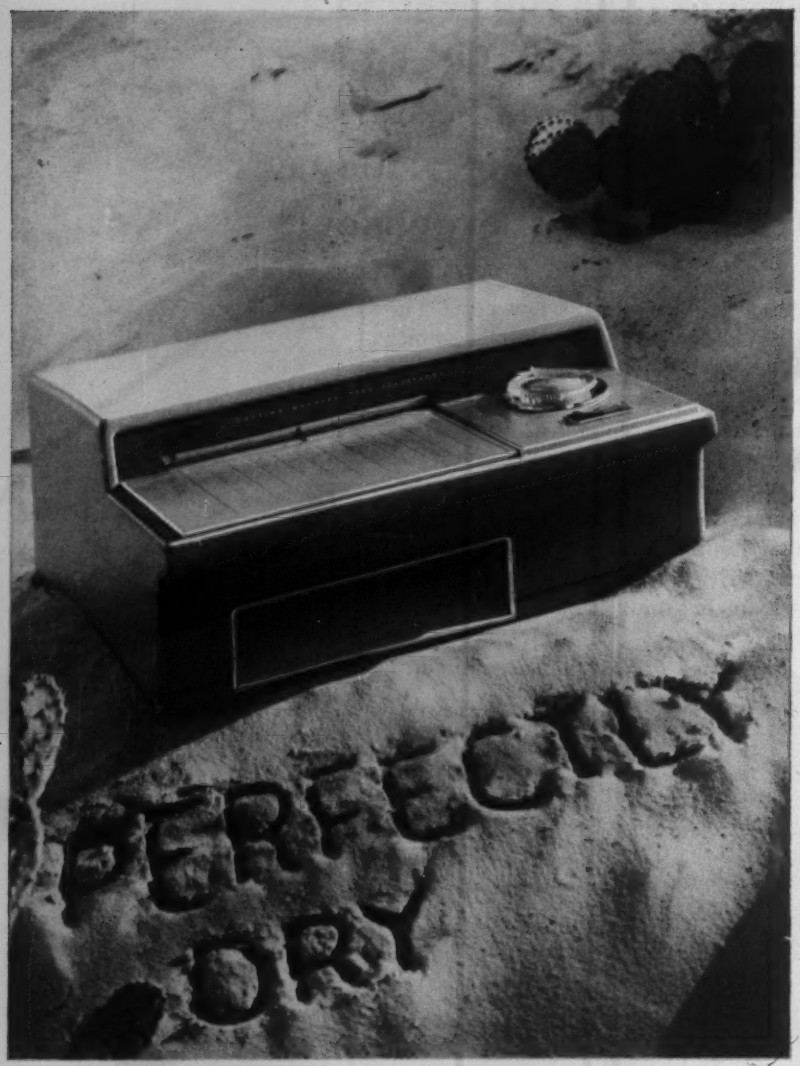

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Determine EDP potential, Baumes urges business

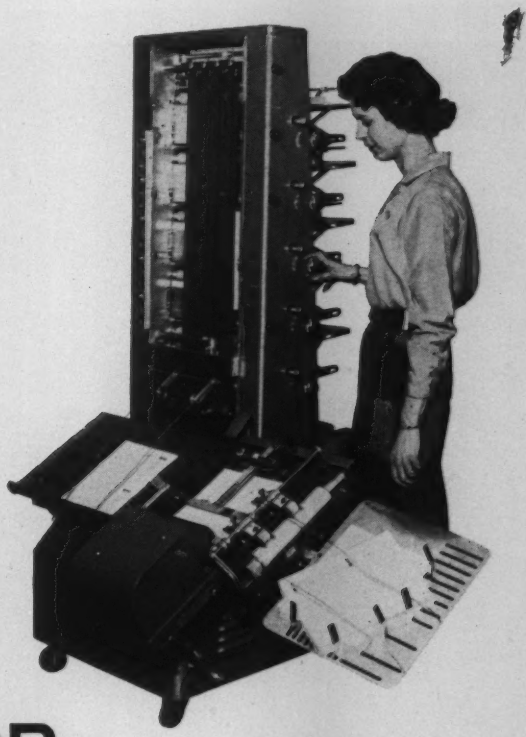
The role management will play in the future of a business community centered around electronic data processing was set forth recently by Carl G. Baumes, National Industrial Conference Board. Addressing the opening session of a two-day Data Processing and Computer Conference and Business Show held in New York last month by the National Machine Accountants Association, Mr. Baumes outlined the opportunities for managers of data processing projects: "Some of the more effective administrators of computer operations are the ones who have succeeded in providing management with an understandable explanation of the potentials of electronic equipment and the importance of desired changes in organization, systems and procedures," he said.

Long-term goals needed

"Management generally regards electronic office equipment as a tool that, initially, can perform the data processing tasks that have become too voluminous for conventional office equipment," Mr. Baumes continued. "While better management information, and consolidation and integration of data processing, are long range goals of some companies, these goals are seldom set forth as steps in an approved program. Rather, most managements have approved the acquisition of electronic equipment but have left it up to the heads of the operation and their staffs to exploit the computer's full potential and determine its ultimate role in their companies.'

Mr. Baumes pointed out that most data processing projects are being carried out by a staff from a major department of the corporation such as that of the controller.

"Two reasons are commonly mentioned for the present organization status of most electronic computer operations," Mr. Baumes concluded. "One is that the long range role of electronic data processing has yet to be determined. The other is that most managers of computer operations have not had time to demonstrate their capacity for managing a major staff department."



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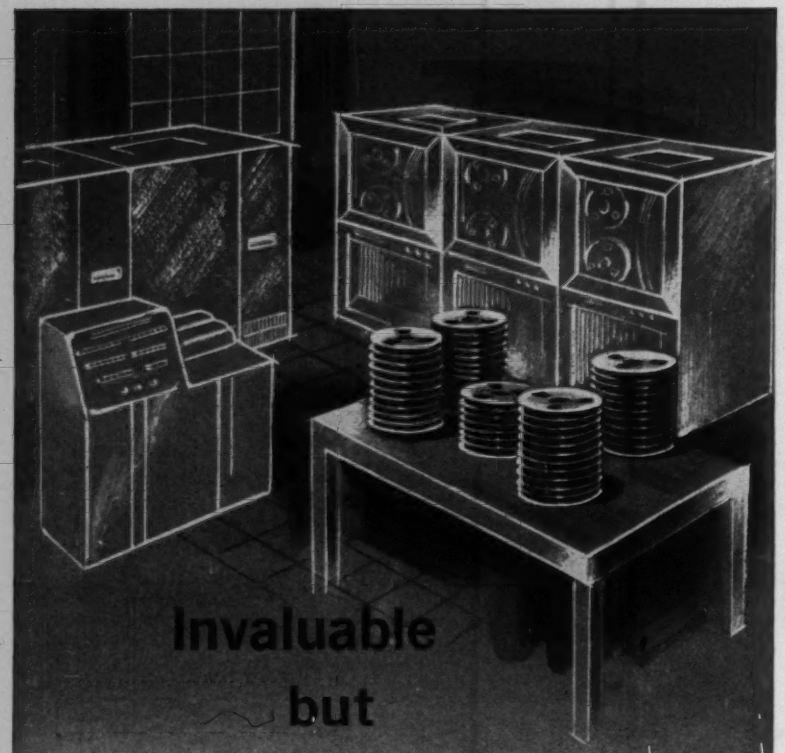

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BOOKS

DO THEY UNDERSTAND YOU?, by Wesley Wiksell. The Macmillan Co., 60 Fifth Ave., New York 11. $4.95.

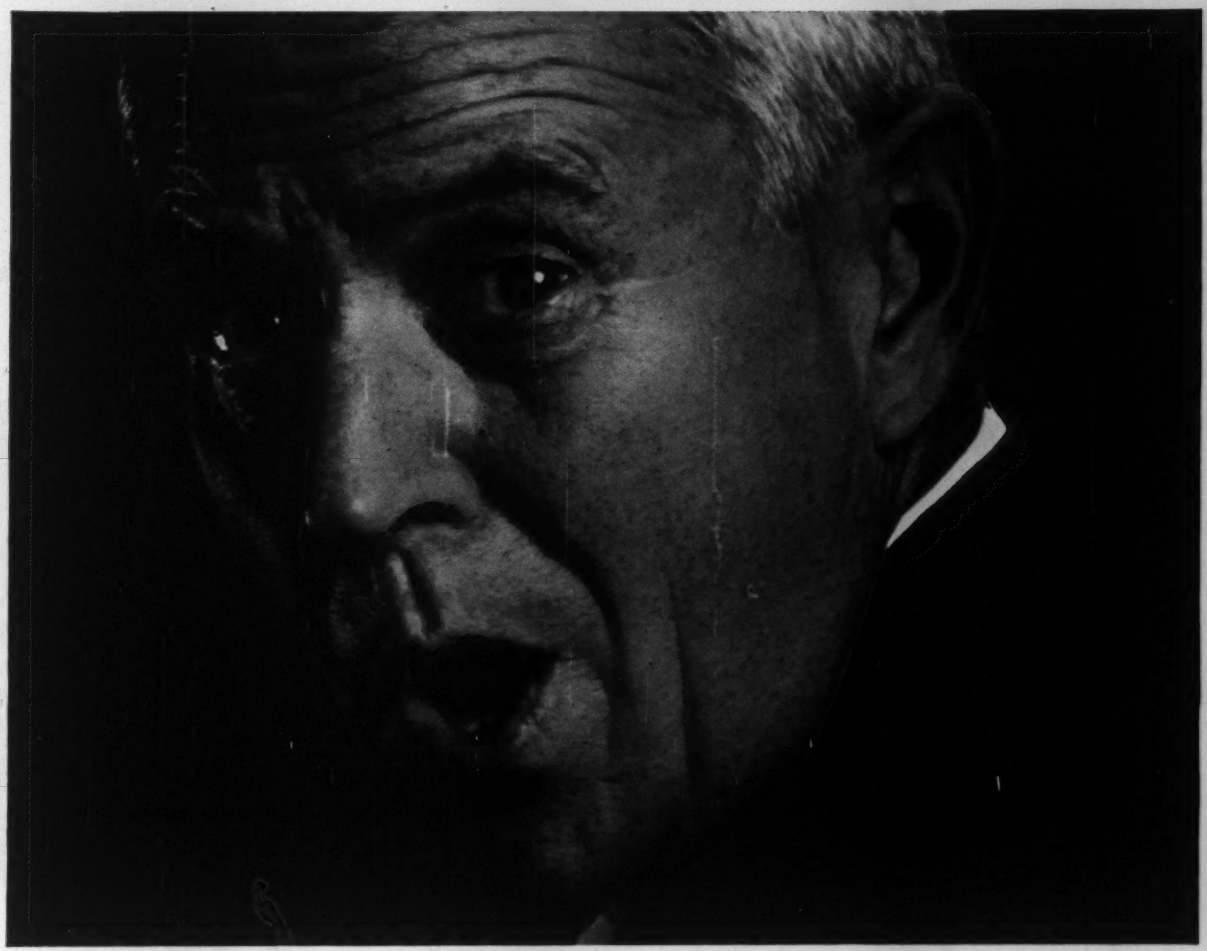
The author assumes, first of all, that business and industry need priming, if not prodding, on the fundamentals of "face-to-face" communications. Mr. Wiksell's intentions are not in the least imperiled by his statement in the preface that the key to improvement of relations through communications depends upon "one's own attitude."

The importance of one's attitude can be readily seen if we accept the author's belief that the chief task of the supervisor and manager is to act as the company's communications center. One needn't be clairvoyant to discover that the job of being a "communications center" is a demanding one; the responsibilities entailed are actually those of a fulcrum, bearing the weight, however unequal, of employee and employer intentions.

The act of communication may take a variety of forms, but: "In this book," Mr. Wiksell states, "we will devote ourselves to the most common, the least written about, and often the most desired, yet most baffling aspect of communication: namely, speaking and listening in everyday employer-employee relationships." It is Mr. Wiksell's intent to make the reader aware of the difficulties that can arise from improper communication and to guide him along the path of improvement. Wherever advantageous, the text has been supplemented with illustrations, examples, and an occasional check-list for self-evaluation.

The book is divided into four major sections: "Communication: Problems and Responsibilities"; "Talking to Your Men"; "Listening to Your Men"; "Patterns for Communication." Each section includes a number of chapters which serve to define the effective leader. Especially important is a chapter entitled, "Watch Your Words," which deals with the many motives behind the misuse of language. Trade jargon, clichés, and ambiguities, are

(*To Page 52*)



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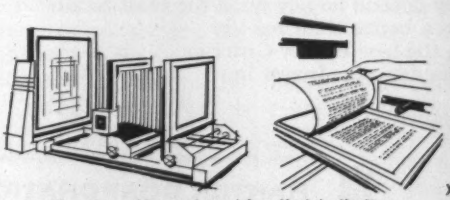

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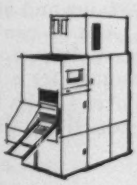

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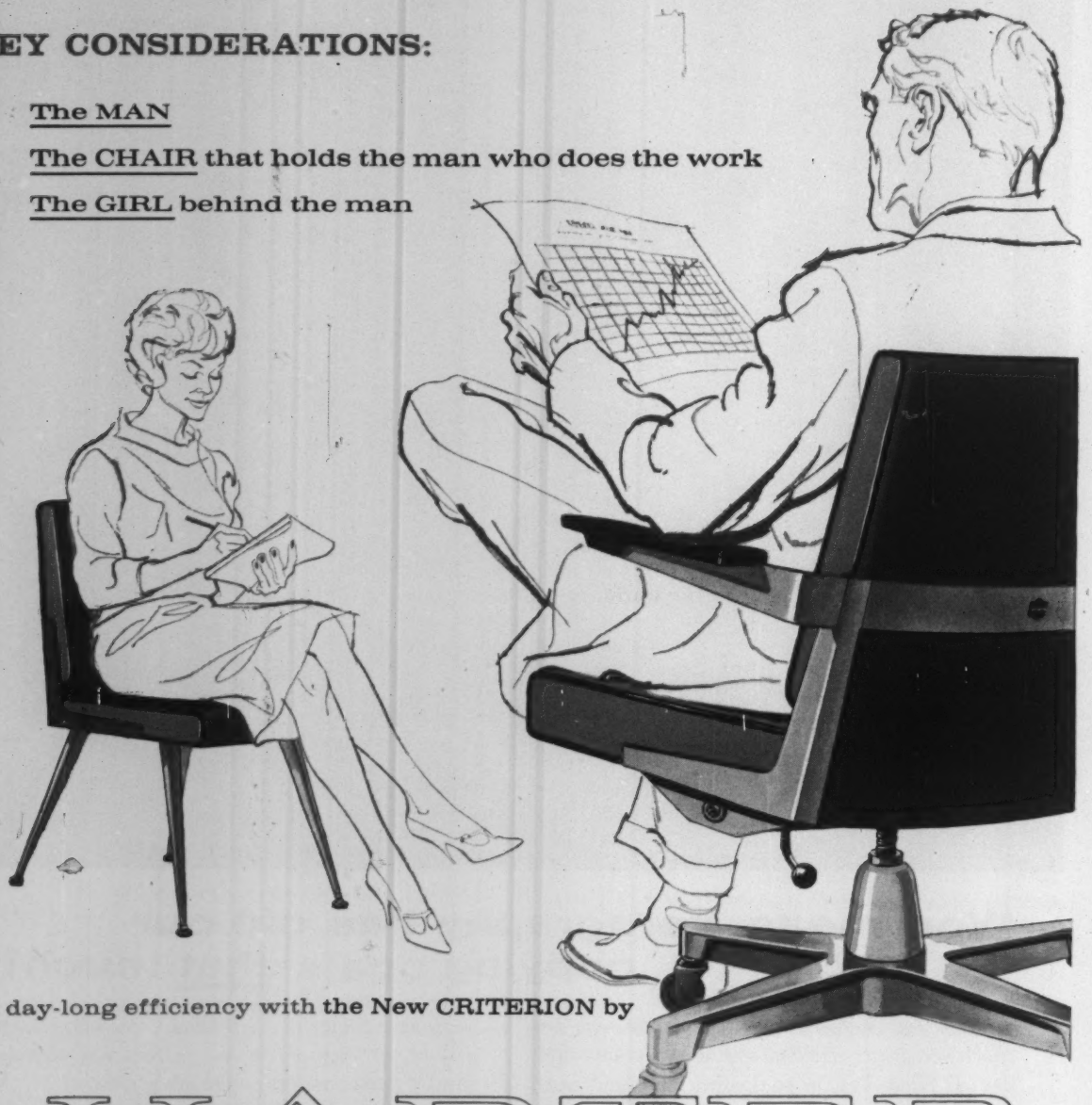

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OUR "NEW LOOK"

WE DEPART from the usual format of this section this month to comment briefly on the new and enlarged magazine you hold in your hands. As was announced last month, *Office Management* bought *American Business* in March; this issue of the magazine represents the first under the new title *Office Management and American Business.*

We announced last month that the merger would result in a larger publication, which, while continuing to concentrate on the office, its present problems, its practices, and its future, would offer increased editorial scope in discussing these subjects.

As an indication of this new and wider range, mirroring the rapidly changing status of office management, the publication's descriptive subtitle has been changed to "The Magazine of Administration and Systems."

In the words of Donald McAllister, president of Geyer-McAllister Publications, which publishes *Office Management and American Business,* the new designation was selected because "Office management today encompasses far more than the management of one central office within a company; it embraces administration of all the processing and communications lines extending throughout the corporation.

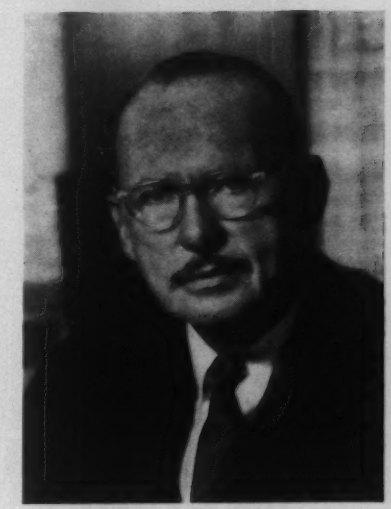
"The importance and responsibility of the office management function are also being augmented by the increasing trend toward centralization of data processing facilities, the emergence of expensive, automated equipment for American offices; and the increasingly vital role which the communications functions play in the overall operations of every company," Mr. McAllister continued.

"For these reasons, the broad term 'administration' is being adopted in our subtitle to suggest the scope of the responsibilities which our executive readers are assuming. We are, in other words, redefining our magazine in terms of the changing responsibilities of the audience which it serves, and of the publication itself. We are the magazine serving the top management executives responsible for all the administrative functions of the company—its communications network, paperwork routines, and data processing facilities—as well as the staff experts who plan the systems by which all these functions are meshed into a cohesive and comprehensive whole."

That statement, we feel, expresses admirably the purpose to which this magazine is dedicated. We serve the executives in overall charge of every phase of office work, whether that work is carried out in headquarters or in the field. In the large company, where responsibility for administrative functions may be a full-time responsibility at the top level, we are read by the vice president in charge of administrative services or his equivalent by some other title. In medium-sized and smaller companies, our reader may be the president; he may be the office manager; he may be the controller; he may be the secretary; he may have one of a number of other titles. Whatever the title, as long as he is responsible for administration of all the company's office operations, internal and external, he is our reader. We shall meet his needs —for information and ideas.

A large order? Yes, it is. But we feel that, to date, we have met those objectives. We trust that, in the future, we will meet them even more completely.

And here we feel that the merger of *American Business* with *Office Management* brings us even closer to our stated goals. *American Business'* editorial purpose was much the same as that of *Office Management*—better overall company management through office improvement. We feel that incorporation of American Business features with our own articles on automation, systems design, personnel, our own Tools of the Office Series, our own Office Design section, cannot help but result in a stronger and more vital magazine.



Donald McAllister

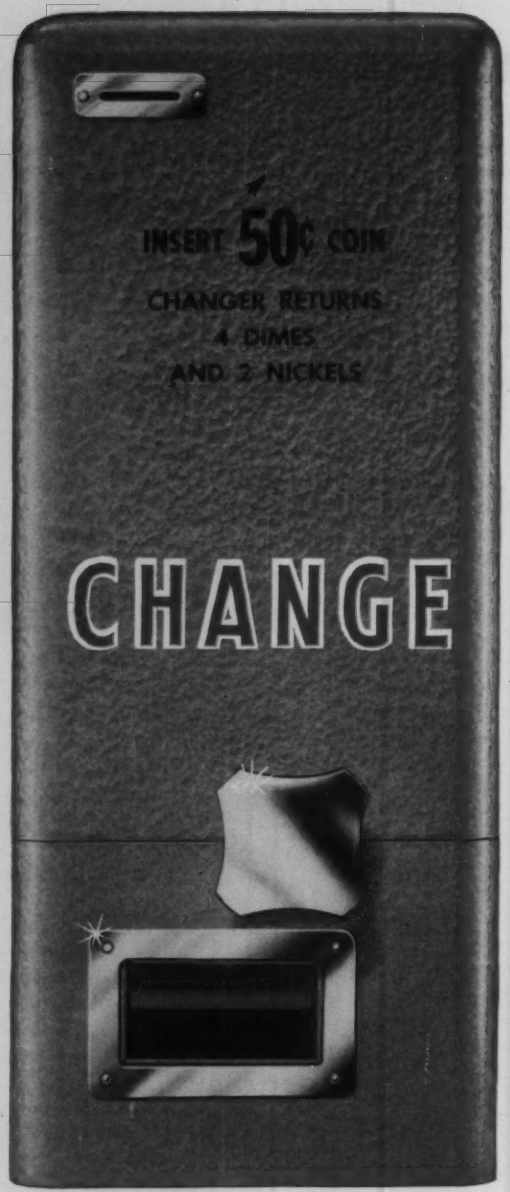
In addition to adding some *American Business* departments, we will also plan to publish articles by many of that magazine's contributors.

Last, but far from least, J. Allen Rhea, former managing editor of *American Business* is joining the staff of this magazine as associate editor—an addition we know will prove an important asset to the magazine.

Incidentally, one last note—the new subtitle echoes the name of the first business magazine published in this country, which became a Geyer-McAllister property with the acquisition of *American Business. System* magazine, founded in 1900 is generally regarded as the first general business magazine to be published in the United States, although magazines covering specific trades had, of course, preceded it. It was merged in 1935 with *American Business,* and its title now lives again in the magazine of which *American Business* has become a part.

Robert M Smith

Editor



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ARE YOU GUILTY OF THESE COMMON ADMINISTRATIVE FAULTS?

Fear, anger, overexpansiveness, inconsistency can interfere with good judgment

By RAY E. BROWN
University of Chicago Clinics

JUDGMENT is an affair of the mind – a mating of the facts of a situation with the values of the particular individual making the judgment. In earlier articles it was pointed out that good judgment usually is exercised by normal people but that everyone occasionally demonstrates bad judgment and some individuals demonstrate much more bad judgment than others.

It was stated that bad judgment seems to result most often in specific situations from an interference with our judgment process, and that the exercise of good judgment depends in large part upon controlling such interferences. The notion was put forth that improvement of our judgment depends upon identifying and removing—or quarantining—the inhibitions to good judgment.

If one observes his own conduct and that of other administrators, he can recognize tendencies common to all administrators, which interfere with their judgment. They are common to administrators because they are human tendencies. This means that they are common to everyone but they are accentuated in administrative conduct because the administrator is confronted with so many situations in which these tendencies may exert themselves. Also, the judgment of the administrator is subject to much more exposure than that of most other people.

The following discussion concerns those tendencies

Fatigue or ill health are, it goes without saying, fatal to good judgment.

which the writer has found most prevalent in his own work as an administrator and in the work of other administrators whom he has observed. It will be noted that some of these tendencies are in themselves an asset to the administrator if their influence on his judgment is controlled. Some can be said to be in conflict with each other and the individual's judgment is at times "torn" between the different tendencies.

Physical factors are the most obvious of the inhibitors of good judgment. These are the factors most easily recognized because they are factors that disturb the emotional stability of the administrator. Some of these physical factors are concerned with diseases which may represent a chronic handicap to good judgment. It is not the purpose of this paper to discuss such diseases since their influences are largely beyond the control of the individual himself. The influence of illness on judgment must be recognized by the administrator, however, and he should seek medical assistance in the prevention and control of such diseases. Modern medicine can cure many of them and can help the administrator combat the effects on his judgment of many of those that cannot be cured.

Good health is in every way a valuable asset of the administrator and should be treated as such. Bad judgment must be blamed on the administrator personally, regardless of its cause.

Physical factors that produce temporary short-term influences against good judgment, and which are controllable by the individual, are more important to the usual administrator than those that might be classified as pathological. This is true, if for no other reason, because the administrator who suffers from chronic and uncorrected impairment of his judgment will most likely be weeded out of administration. In any event, the consequences of his bad judgment usually will not be too pronounced since his judgment will not be fully trusted. Because repeated errors in judgment will cause his judgment to be suspected, the organization will most likely develop ways and means of reviewing and even by-passing it.

It is the occasional and temporary lapses in good judgment, on the part of individuals whose judgment is respected, that do most damage to the enterprise. Other members of the organization will not scrutinize his actions closely and the occasional error will not be recognized. Or if others do feel an error in judgment has occurred they will be reluctant to challenge it because the individual's past record of good judgment will make them uncertain of their own evaluation. Such sporadic instances of bad judgment can catch the organization offguard and perhaps send it off with full steam in the wrong direction.

In mild form, fear can prevent hasty decisions, but if it turns to fright, judgment will be adversely affected.

Fatigue lowers the "stress level"

The two physical factors that sporadically and importantly affect judgment are fatigue and a low stress level. When an individual is tired he simply doesn't think clearly. His mental processes are clouded and his span of attention is greatly restricted. The chances are that he will suffer fatigue most often at the times he can least afford its effects on his judgment. These are the times when he is faced with important problems or is under the greatest pressure. Long hours and hard hours in study of the problem, plus sleepless hours in worry over it, leave him at his dullest when he needs to be at his sharpest.

This condition also affects him in either of two other ways. He may take the one extreme of submission to decisions or conditions that are against his better judgment because he lacks the energy necessary to determine proper solutions or to carry out changes. On the other and more likely extreme, he may give way to the irritability and loss of temper that usually accompany tiredness and blind or override his better judgment.

This is a way of saying that fatigue sharply lowers the individual's stress level. The effects of stress on judgment will be examined a little later. The effects of fatigue on judgment, as well as all the other activities of the administrator, are so clearly detrimental that keeping reasonably fit is a must for the administrator.

It is recognized that this is more easily said than done since the nature of his work means that the administrator can almost never get all his work done.

This is literally true since there are no set limits to the added gains that might accrue from added planning and added review by the administrator. At the same time, he must realize that administration is a dangerous corner for a tired man and that bad judgment is much worse than no judgment. The law of marginal utility applies to the administrator's use of his own energy as well as to the use of the other resources of the enterprise.

A low stress level is the most vulnerable flank that an administrator can have. Fatigue is only one of many factors contributing to it. It is both a psychological and physiological condition and may represent both inherited and acquired tendencies. Low tolerance to stress is most often manifested in the individual's conduct as anger or excitability. It is the control of the manifestations that is important administratively and from the evidence this control can to a high degree be developed or acquired. The lack of control thus represents either the development of poor habits in this regard or the failure to develop the proper ones.

All of us have seen enough of our own conduct, and of those around us, to learn that the use of a quick temper is in part, at least, habit forming. Each time we let it go it becomes easier to let go the next time. The fact that we are "letting go" is proven by the fact that even the most quick-tempered individuals seem to some extent to choose the occasions and the individuals against whom they take off all the stops. As the habit grows, however, they become less discriminating as to the time and place that they dare display their temper. Unless the practice is checked, it becomes habitual, and the explosion level is automatically set another notch lower.

Too often, the administrator yields to a personal need to be a part of the group.

Frequent displays of temper by the administrator will destroy the respect held for him by his subordinates.

Self-control leads to control of others

An explosive temper is damaging to the administrator's effectiveness in a number of ways. It cannot help but impair the respect in which he is held by those who see him chronically lose his poise and self-control. Control of situations and of individuals is the major purpose of administration and the administrator.

It naturally follows that an administrator cannot expect to retain control over others unless he can first control himself. It also follows that the fear of his temper on the part of his colleagues will serve to isolate the administrator from the flow of information and ideas so vital to his effective performance. Things will not be brought to his attention by his colleagues and subordinates for fear of his creating a scene. His direct requests for information will be answered more as he wants them answered than the way they should be answered. His communications will become fouled up by the sugar-coating on the messages he receives.

Continued demonstrations of unreasonable anger will ultimately eliminate even the one single advantage that the administrator might gain from a display of temper. The organization will become accustomed to such manifestations and adjust to them. Irritation on the part of the administrator will then lose any significance as a method of demonstrating substantial dis-

(*To Page* 20)

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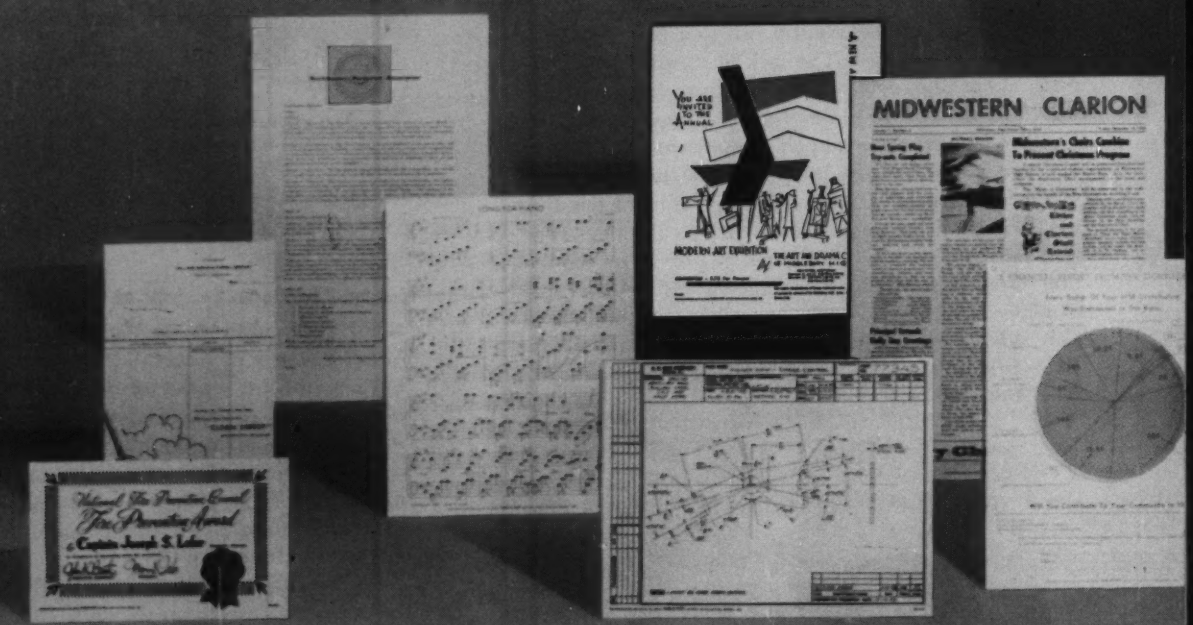

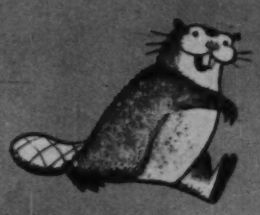

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—Robert M. Smith
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—Gerald Cook

SEPTEMBER 1959
Automatic programming—what does it offer, how does it work? (Part II)

OCTOBER 1959
What's ahead in automation for the nation's smaller offices?
—Robert M. Smith

NOVEMBER 1959
Visible record computer adds "New Dimension" to banking automation
AMA speakers report—automation will raise status of office manager

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AMA speakers report—automation will raise status of office manager (Part II)

JANUARY 1960
Total integration through automation foreseen as major advance of sixties
—Robert M. Smith
Three automation milestones of past decade: An Office Management staff report

FEBRUARY 1960
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Anger is damaging

(*From Page* 17)

pleasure with organizational and individual performance. People will still dread the administrator's temper but they will not be able to interpret it.

The administrator must exhibit displeasure with inefficient and inadequate performance so that everyone may know the level of performance expected. If the situation warrants, it may be necessary that he exhibit anger at times in order to demonstrate extreme displeasure. A big thing is a relative thing, however, and quickly becomes a little thing if it is the only thing that people ever experience. Administration by tantrum is effective only so long as the tantrum represents a change of pace.

The most damaging product of anger is its effect on the administrator's judgment. In the first place, it often will cause him to ignore and override his best judgment. He will do and say things that he knows at the time he should not do and say. This writer can recount from his own conduct instances in which anger has caused him to act against his better judgment. This is due to the rash position anger leads one to take, and the consequent necessity of acting up to that position. It is a matter of acting out a role of courageousness that was adopted under the heady stimulation of anger. In the second place, anger keeps us from allowing our judgment to form. In such instances we act without taking time to think. We lash out at the provocation, or at the nearest substitute if we cannot recognize the real provocation or if we are afraid of the real provocation.

At such times we are more interested in getting even than in acting evenly. This is illustrated by the letters and memos that we dictate one day and discard the next day after we have given our judgment an opportunity to operate. Unfortunately, we cannot discard words that are spoken in anger and actions that are taken when anger has blocked our judgment. Some of us may be big enough to eat crow, and admit we acted emotionally, but a

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Anger monopolizes attention, inhibits judgment

steady diet of crow doesn't nurture effective administrators.

Anger inhibits whatever judgment the administrator does form by fixing his mind. The person or thing he is angry about monopolizes his attention and prevents a rounded judgment. He develops a fixation on the affront and reviews it over and over again. His mind goes round in circles and is dominated by the incident rather than the circumstances which surround the incident. He can't have an open mind because his mind remains filled with the fixed ideas that hot anger has welded in his mind. He can't have a balanced perspective on the particular problem because he keeps viewing things from the same angle. He keeps seeing the thing that made him mad rather than the things that need to be done about the problem. A brooding mind is no spot for breeding new questions and new possibilities by which to view old problems.

"Getting even" is injurious

The effects of a brooding mind on the judgment of the administrator go well beyond the fixation of his thinking on the affront or hurt that has been done him. The tendency to seek retribution, to get even, is a natural and compelling correlate of anger. We get mad about things but we get mad *at* people. We blame things on people and therefore focus our anger on the individuals we connect most closely with the things we resent. The extent to which we blame the individual does not seem to be in relationship to how directly he was involved but rather to how great is our resentment. Sometimes we even hunt for someone on whom to take out our anger. There seems to be some sort of law of human-physics that says we must avenge an injustice with an indignity of equal size on another human. This is probably what we mean when we talk of "getting even." It is perhaps involved also in our desire to "take it out" on someone.

The "getting even" process is unusually injurious to the work of the administrator. First, he has so many opportunities to have things go wrong because he is involved in so many things. If he lets his paranoia get out of hand he can easily see Indians behind every obstacle and spend all his time getting even with people rather than getting on top of his problems. It doesn't take too much of such activity to actually have an Indian behind each problem—an Indian in war-dress. Those around the administrator have the same human tendencies with which he is infected and will feel the same urge to get even with him. His desire for revenge will unite those around him but the united front he needs so badly will be against him instead of for him.

The united front against the revenge-minded administrator will not be limited to a private club consisting of those he "has taught a lesson." The administrator is under the constant scrutiny of all members of the organization. His actions are weighed in terms of the mean-

(*To page* 68)

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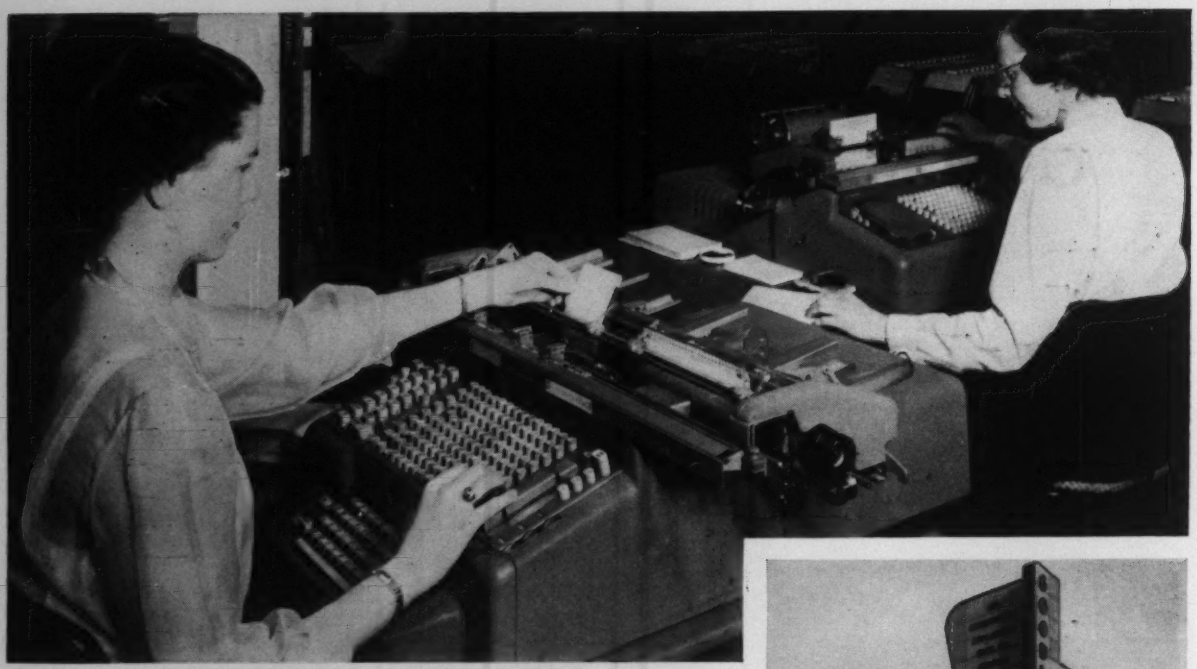

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GIANT BRAIN—OR GIANT MORON?

Your computer can play either role —

The choice is up to you

By RAYMOND DREYFACK
Director of Tabulating Systems
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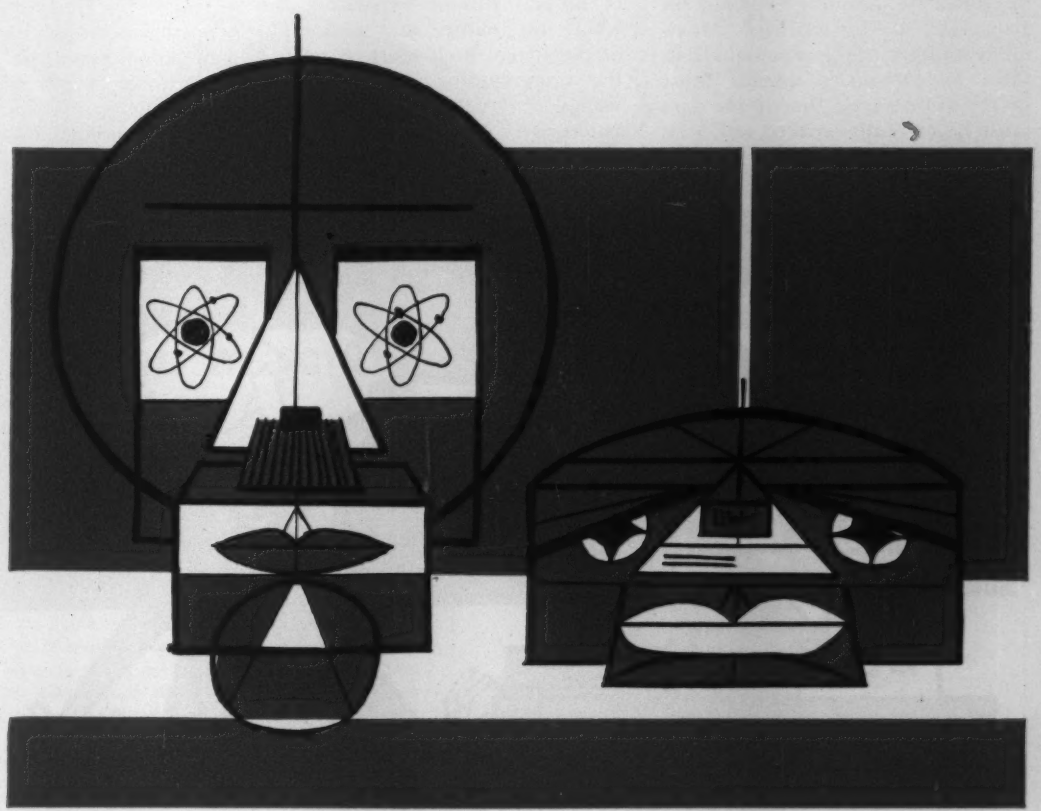
YOUR COMPUTER can be a highly effective management aid, or a costly and oppressive headache. In short—a giant brain, or a giant moron. It is capable of placing the vital answers you need to run your business right at your fingertips where you want them; or it can become a ponderous Frankenstein threatening to engulf its proponents in a churning sea of confusion, chaos and inaccuracy.

The choice is up to you. The success of your computer installation is largely dependent on two factors: pre-planning and control. Or, more correctly, pre-planning *for* control.

When management orders a computer with the prospect of pouring thousands of dollars into its introduction and operation, it expects two things from the system:

1. All the information promised, plus a cushion of flexibility for the future.

2. Accuracy of results. Unfortunately, while this certainly is not too much to ask, these factors are not achieved as a by-product of the salesman's proposal. They must be painfully, and with extreme judg-



The success of your computer installation depends upon two factors: pre-planning and control.

Determine future needs before setting up a program

ment and care, built into the pre-installation plan.

One great advantage of a manual system of processing is that exceptions can be handled as they occur. When the unusual or abnormal takes place there is always time to sit down and talk it over, to decide what should be done.

A computer, unless told in advance specifically what to do, manifests all the traits of a colossal ignoramus. Operating at the rate of thousands of calculations per second, it has neither the time nor the sense to consider any factor or condition that has not been previously programmed into its storage. It's essential therefore, if the program is not to bog down at some crucial point, to provide for everything that could possibly take place, in advance of installation.

Trouble especially must be anticipated. All phases of the operation must be minutely explored on a detailed, step-by-step basis. Maximum number of digits contained in price and quantity spreads must be pre-determined. Descriptive data must be carefully worked out, coding sequences meticulously designed.

Provision must be made for expansion possibilities of every type: business volume, number of items, and number of accounts. The possibility of a merger or acquisition must be taken into account. or that of any other change likely to alter the basic requirements of the proposed system. Once the program is set up, tested, and de-bugged, it may be expensive and impractical to think in terms of major revision.

Flexibility can be programmed

This doesn't imply there are no devices for the alteration of existing programs. On the contrary, a clever programmer will build such flexibility into his plan. Also, to a large degree, the modular, or building block concept of providing for the expansion of computer components as needed, takes care of most kinds of normal volume expansion. But where the nature and philosophy of the system itself must be revised, the programming and format revamped, we then run into a costly enterprise.

Before you race irately to the phone to cancel that order it may be significant to consider that almost invariably the computer installation – with controls properly pre-planned – turns out to be superior to its more conventional counterpart, both in the scope of its output and the reliability of its results.

There are numerous methods of keeping the unwieldly youngster in line, and every method devised should be used by programmers and auditors where applicable. Appreciating the urgent need for uncontested accuracy, computer manufacturers have turned their vast engineering resources to use towards this end.

Most computers have built into their intestines one or more devices of automatic machine-instituted control. Double reading and double writing is one such device. Double arithmetic is another. The dual operation, employing different units or components, is performed at electronic speeds so fast that time taken is no factor. Some machines use the recently introduced concept

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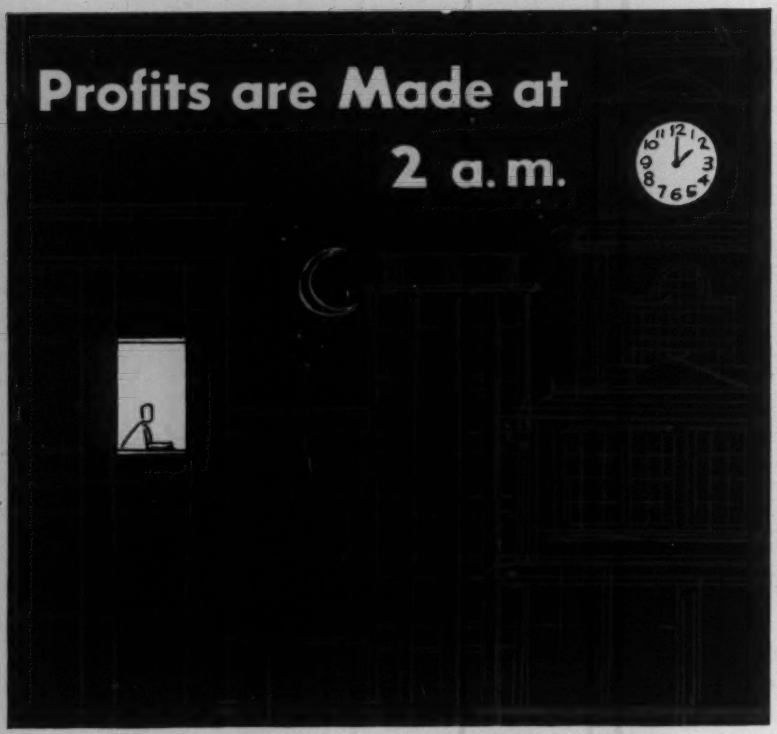

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of time-sharing or simultaneity in such a way that when a comparison is made to ensure the equality of the two results no time at all is lost.

The parity check is another machine-geared proof function designed to assure the presence of the proper number of characters—magnetic spots—on the record being stored or processed. Some computers contain a built-in clock check preset to stop the operation should the timing of the control circuitry be off.

The computer itself is highly adaptable to pre-planned control. For example, specific conditions in the processing units, or on the records being passed through the machine, if hostile to the system, may be flagged, and the computer impulsed to punch out or print out an error indication. This may be done without interrupting the normal processing operation. It is possible to make the necessary corrections in a later pass on an up-dated or adjustment basis, so that precious machine time will not be wasted at the moment of error detection.

In addition to the built-in automatic controls, and of equal, if not greater importance, there exist a number of man-made controls for detecting flaws. These can be designed into the program in advance, or made a part of the overall system.

First and foremost, no machine is more reliable than the source data fed into it for processing. A foolproof verification of keyed input information, whether in the form of punched cards or tape, must be assured if subsequent accuracy is to be expected. Contrary to the impressions of the uninitiated, the great majority of errors related to computer operation occur as a result of unreliable input data rather than in the area of machine failure. Again, the dependability of our system boils down to the human element.

While on the subject of people, care must be taken in organizing and maintaining an effective control liaison between factions respon-

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sible for the planning and operating of the computer. This would involve principally auditors, accountants, systems people, programmers and technicians. Generally speaking, there are two main factions: technical and non-technical personnel.

Personnel need understanding

The question arises: How much must the auditors or accountants know about the workings of the computer? Well, they certainly don't have to become electronic engineers. On the other hand, they must be reasonably informed with regard to the operation and potential uses of the system.

By the same token, technical personnel should have sufficient understanding of, and appreciation for, accepted accounting practices and procedures to be able to work harmoniously with individuals who are charged with financial and control responsibilities. In short, every effort must be made to bridge the language and technical planning barriers that must naturally exist between diversified specialization groups.

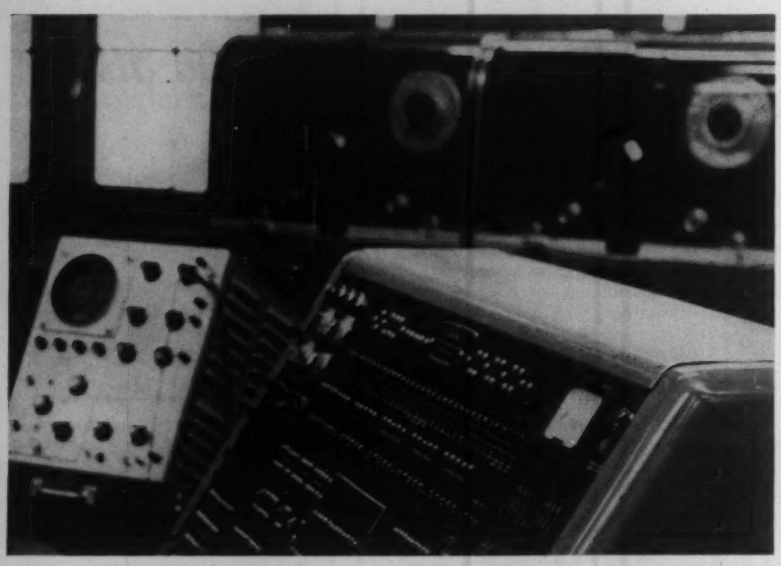
It is necessary, but not always easy, to provide some kind of an "audit trail" within the computer system. To effect this objective in as practical and economical a way as possible, the liaison and systems understanding between the accounting and technical groups must be close. Accounting requirements with regard to controls must be clearly defined on the one hand, and computer idiosyncrasies and limitations made clear on the other.

Generally speaking, the simplest way to provide a back-up route for the tracking of transactions is to produce a write-out or punch-out record while the transaction is being recorded or up-dated. This, however, sometimes presents a hitch. The writing of hard copy, or the punching of tab cards, is substantially slower than internal processing functions, and could prove costly in terms of computer time utilization. In the case of some of the newer computers, the time-sharing concept of writing or punching simultaneously with other processing activities may help remedy this situation. The problem then becomes one of programming, with the end in mind of taking full advantage of the machine's time-sharing potential.

If the situation is such, however, that it is impossible or impractical to provide a transaction-by-transaction documentation on a running basis, some other means of obtaining a "trail" must be worked into the system. For example, if random processing is a part of the plan—each transaction passed through the computer as it occurs, rather than on a pre-sorted basis—groups of documents may be batch-coded for future reference. Dating of transactions may also be used, or the automatic assignment of sequence numbers to tie source documents into data processed by the computer.

Once the audit trail is worked out, it becomes the joint responsibility of the auditor and technician to make certain the accuracy of all up-dated information is unimpeachable. Sometimes the computer itself can be programmed to provide this assurance. Automatic totals may be accumulated for later comparison against predetermined totals taken of source material. Such totals need not apply only to quantity or dollar information. "Hash" totals of code number, employee clock number, etc., are equally effective. Document or transaction counts also may be utilized to tighten the control network further; or forms number accountability.

Before a computer system is put into effect on an operating basis it must be checked out in as much detail as possible. Standards of performance should be set up, and actuals compared for accuracy and validity. Extremely vital is the careful and complete simulation of data, with allowance made for every conceivable contingency—field limits of dollar amounts, for example, to the maximum possibility; combinations of digits, etc. In other words, it is far better to strain the system beyond its capacity by manipulation, in advance of installation than to do it at the height of processing by unforeseen conditions. After this is done the program should be me-



Accountants and auditors need not become electronic engineers.

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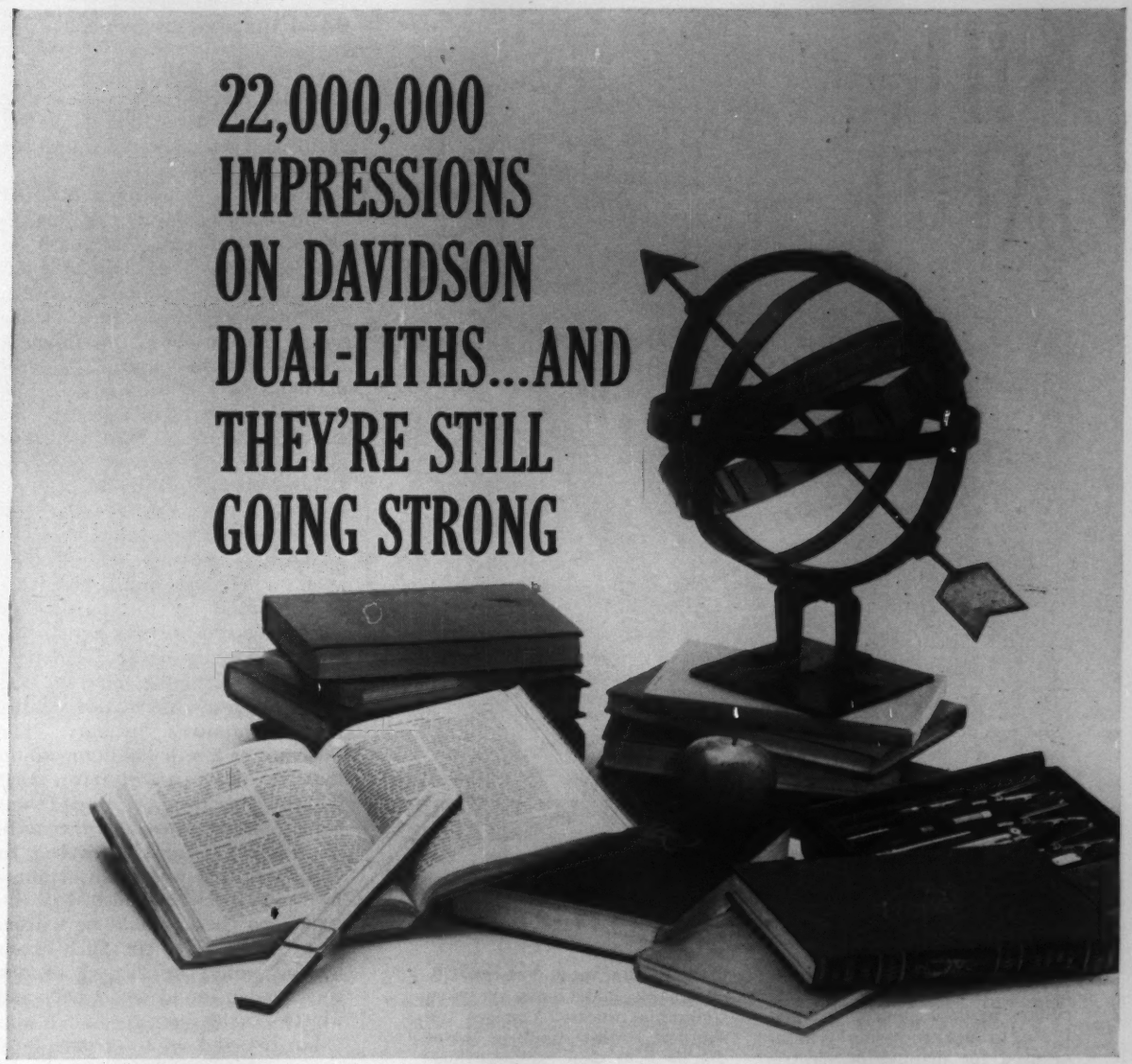

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ticulously checked to determine that results obtained coincide in perfect detail with test answers worked out on a manual basis.

In addition to testing the actual results of the computer pass, it's advisable as an extra safeguard to refer the written program to a second qualified individual for review.

Errors and misjudgments are bound to occur from time to time regardless of the sound and careful planning of the installation. The really serious error, of course, is "the one that got away." Spotting errors as they occur, therefore, is essential to the well-being of the installation. With this in mind, certain types of control can be programmed right into the machine itself. There are numerous tricks of the trade for the purpose of catching errors in time and bringing them to light. "Zero balance" checks, for example, may be provided to test information stored in the computer's "memory." The existence of a zero condition would indicate that information that should have been processed was either omitted or lost. Another technique is automatic testing to make sure that maximum amounts have not been exceeded. For instance, no check should be written in excess of $300, etc. Such excess writing would be flagged by the computer to sound off its bells and whistles in alarm.

Finally, and as a foregone conclusion, the normal internal control practices for testing payrolls, cash, receivables, etc., will naturally apply to computer processing as well as conventional techniques. In some cases the applications of such practices may require the aforementioned liaison between technical and non-technical people to a large and possibly complex degree. In other instances the computer itself, with its tremendous speed and flexibility potential, may serve to accomplish the control function on a simple and economical by-product basis.

The potential satisfactions of a computer installation are great. It is a thrilling accomplishment to achieve. By carefully pre-planning your system's controls, the installation can become a boon instead of a bane.

President Lewis T. Ellsworth in his Shaw-Walker furnished office.

INSURANCE COMPANY PRESIDENT TELLS "How we improved our way of office life and increased work efficiency 15%"

Surety Life Insurance Company wisely provided its employees with *interior working comforts* and conveniences in their beautiful new home office building. They chose Shaw-Walker equipment for use at every office job.

Speaking of Surety's new home office in Salt Lake City, President Ellsworth said: "Since we began using Shaw-Walker Clutter-Proof Desks, work efficiency has increased 15%."

Shaw-Walker can provide *your* offices with exactly the right equipment for your needs—everything from beautiful Carlyle executive desks (like Mr. Ellsworth's) and point-of-use files, to record protection and automation accessories. It's superbly functional equipment that pays its *cost* many times over in space, time and work economies. You can always *do better* with Shaw-Walker. Representatives everywhere.

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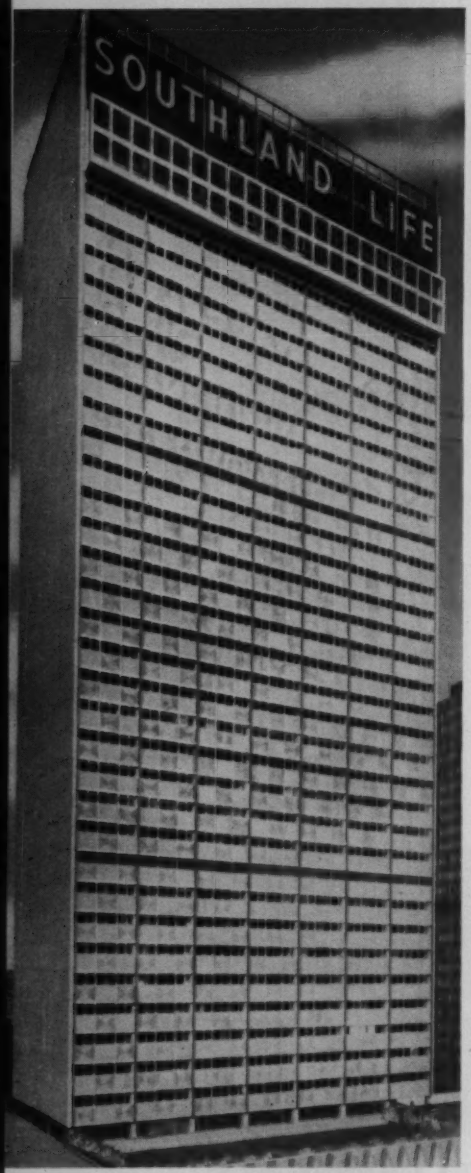
To meet the individual requirements of each job, the Claims Department uses several models of Shaw-Walker Clutter-Proof Desks and Correct Seating Chairs. Happier people who get more done is the result.

"The most practical desk organization idea I've ever seen," says Vice-President R. S. Satterfield of his Carlyle Desk.

Files at Southland Life are being converted to electronic data storage system.

Office of the Year Award

(for offices designed for more than 300 employees.)



Southland Life Insurance Co. occupies 15 of the 42 stories of the building.

Southland Life Insurance Co.

Dallas, Texas

WHEN SOUTHLAND LIFE Insurance Company decided to construct a new home-office building, in Texas-style it set its sights on something more. The company determined to create a center that would be the new heart of Dallas.

Southland Center fulfills that ambitious dream.

Based upon five years of planning and built upon a spacious downtown site, the $35-million complex consists of a 42-floor office building called Southland Tower, the Sheraton-Dallas Hotel, Southland Plaza, and five underground levels that among other things can accommodate 2,500 cars. An additional 32-floor office building is planned for future expansion.

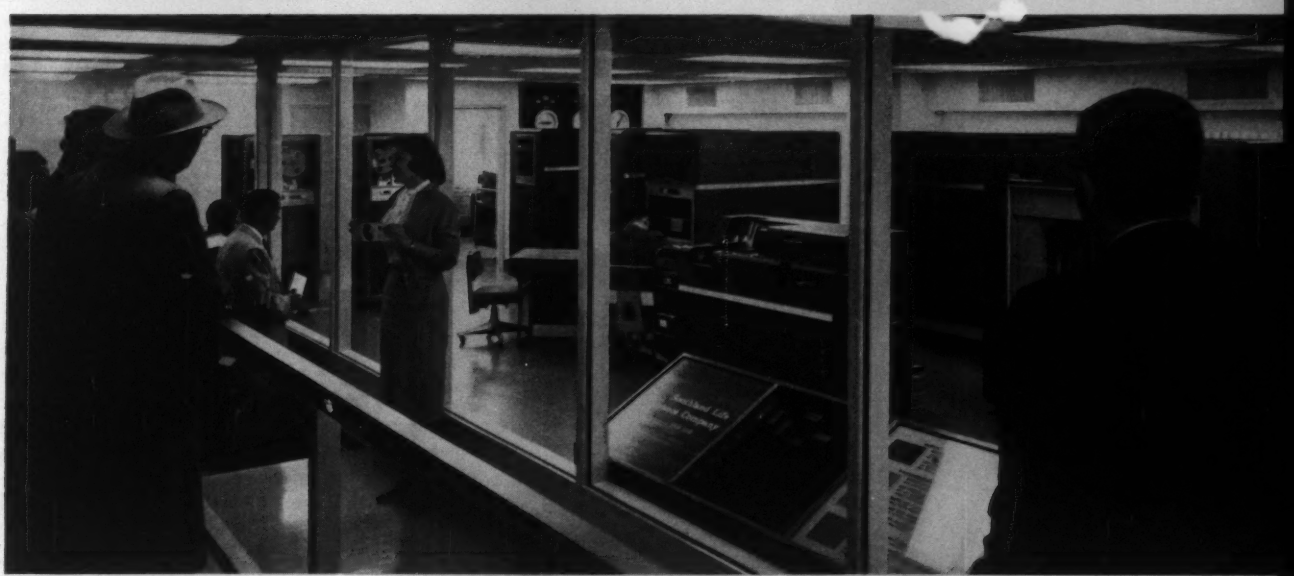
The result of all this provides a combination of services and facilities that constitute a city within a city: retail shops, private clubs, a heliport, parking, and garage facilities, airline ticket offices, and complete hotel facilities – all set on a beautifully landscaped 2½-acre site in downtown Dallas.

Southland Center architecture does not employ the "skin-and-bones" design in which the structural skeleton of a building is seen through a glass skin. Perhaps the architects were constrained from this by the Texas sun, which burns so brightly from June to October and makes shade essential. (Even in New York City such buildings without air conditioning would be uninhabitable in the summertime and their windows have to be hung with draperies, thus shutting off much of the view the glass provides.) Southland Center is air conditioned, of course, and by the largest single refrigeration unit ever installed in an office building in the United States. But its walls are not transparent; they are made of a pleasing combination of stone, ceramic tile and shaped concrete.

The three-story base of Southland Tower is made of precast concrete panels, each faced with an inverted pyramid design in relief. These impart a textured surface to the lower part of the building, especially when the sun's rays cast shadows. The base imparts an aspect of solidity, with a colonnade walk about the perimeter preventing any suggestion of heaviness.

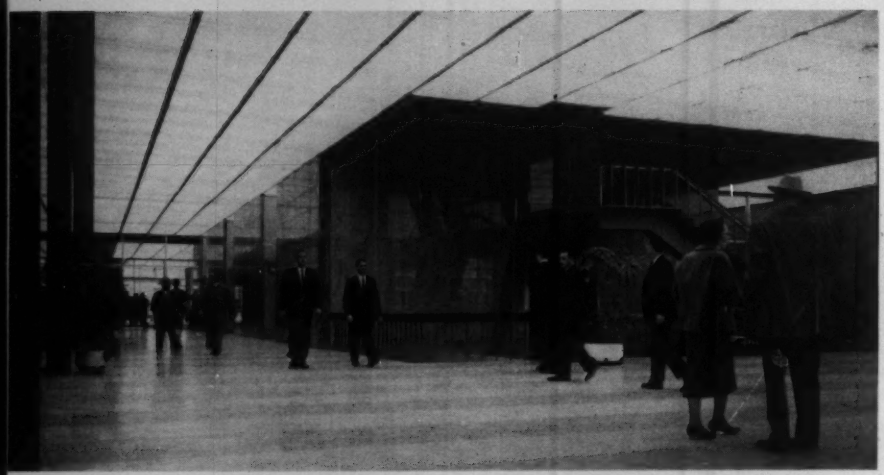
Exteriors of end walls in the Southland Center are faced with precast panels of concrete with quartz aggregate that sparkles in the sun. The sides are faced with glass mosaic imported from Italy. Some 38,500,000 ⅝-inch tiles were used. This was the first such extensive use of glass mosaic, which was determined by extensive tests to be impervious to weathering but also relatively self-cleaning. Thus the building will not require the incessant window washing needed by structures employing glass curtain wall construction. And a half century from now Southland Center should look pretty much as it does today.

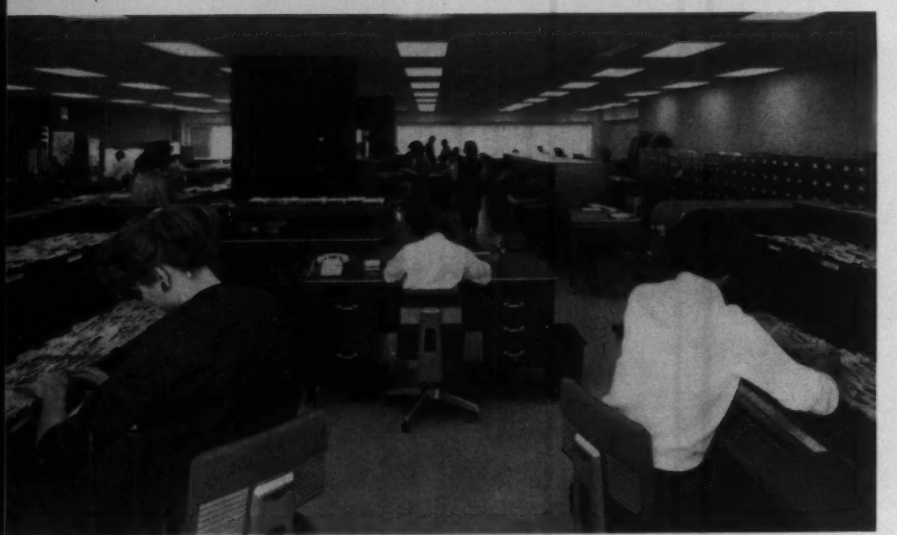
Executive office contains conversation area (left foreground), ample seating, and credenza.



Tour guide describes functions of Southland Life Insurance Company's electronic data storage and processing installation. The IBM 650 Tape RAMAC requires special temperature and humidity controls in the 14th floor data processing center.

Agency Division offices (above) are connected to this spacious reception room. Grand staircase (below) leads to concourse shopping arcade and Grand Ballroom of Sheraton-Dallas Hotel.





Policyowner's Service Department handles all inquiries from policyholders.

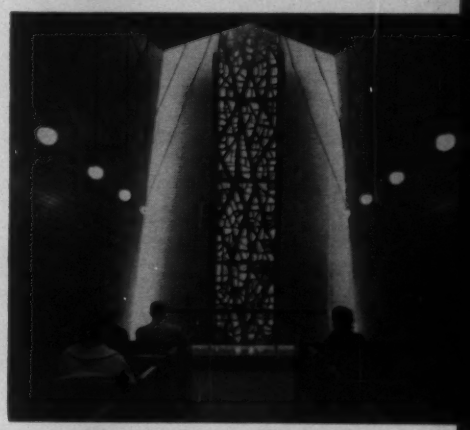
A two-floor section at the 36th and 37th stories is cantilevered eight feet out on both sides of the Southland Tower. This provides structural variety to the tower as the "bow-tie" patterns formed in the mosaic at each floor create pleasant polychromatic variation.

Southland Life Insurance Company occupies the fourth through the 18th floors of the Tower. Interior space was designed for efficiency and a refreshing physical environment. To avoid eye strain and glare, common in many office buildings, recessed fluorescent fixtures bathe all areas with comfortable light of proper intensity under all working conditions. There will never be the need for electrical extension cords and expensive rewiring jobs at Southland Center. A raceway system under the floor permits the location of electrical outlets, telephone and intercom connections within six inches of any point on the floor.

On the 39th floor of the Southland Tower there can be found the Chapel in the Sky, a place where those seeking to pray or meditate can find quiet and repose high above the city's crowds and noises. Large enough to seat 35 persons, the nondenominational chapel has a backlighted stained glass and leaded windows with a vaulted ceiling. Walls are stained, hand-rubbed, butternut.

To provide rapid vertical transportation so essential in a tall build-

Mail, Printing, and Supply Department (left) is on sixth floor. Investment Division (right) has its own offices and receptionist.



Medical Division facilities (left) and "The Chapel in the Sky" are two other features of Southland's new office building.

ing, the Tower's 18 electronically controlled, automatic passenger elevators are set in stages to give express service to the upper floors. Six escalators serve the building's lower floors. There is also escalator service from the 39th floor to the 41st floor, which is ringed by the Observation Deck. Topping the Southland Tower is the Heliport.

The company's employees' cafeteria is located on the fourth floor of the tower and opens on to the landscaped deck of the roof of the third floor.

The 600-room Sheraton-Dallas Hotel occupies a 29-floor tower of its own and also has extensive function rooms on the second and third floors of the Southland Life Tower, with which it is linked by a glass-enclosed lounge concourse. Each floor of the hotel from the fourth through the 18th consists of 15 basic rooms, six luxury rooms and one two-room luxury suite. The smallest guest room, incidentally, is a capacious 14 by 14 feet. The hotel contains a grand ballroom with ceilings two stories high, as well as other large banquet and meeting rooms.

The Center's designers did not neglect to consider those arriving at the complex in automobiles. Cars reach the three-level subterranean parking area via the Motor Lobby, masked mosaic arches over two 35-foot drives that provide one-way entrance and exit lanes for safety. The hotel has a "carriage" entrance of its own.

The towers of Southland Center spring up from a landscaped park that spreads out over three-quarters of an acre, a substantial dedication of the site's two and a half acres. The plaza, downtown Dallas' most beautiful park, is filled with bronze statuary, cascading pools and green lawns landscaped with oaks, willows and seasonal plantings.

Architect of the project was Welton Becket & Associates of Los Angeles.

The Southland Center has brilliantly met the four-fold objectives of its owners: to provide efficient home office space, to serve as an income-producing investment, to meet a number of business and community needs, and to set aesthetic and building standards that will influence all subsequent office and hotel building in the American Southwest.

Glass-fronted offices are visible from street, may be shielded by draperies for privacy.

THE LOUISIANA COMPANIES

Baton Rouge, La.

Office of the Year Award

(for offices designed for up to 300 employees.)

THE RED CARPET at the Louisiana Companies starts at the sidewalk. Not literally, perhaps: actually, the red carpet starts just inside the entrance and leads directly to the reception desk in this handsome, open office in Baton Rouge, La.

But that is the effect – the deliberate effect – given by this small and handsome building on one of the Southern city's main thoroughfares.

The Louisiana Companies, a combination of separate companies in the insurance, real estate, and mortgage loan business, want first of all to impress every prospective customer with the wealth and substantial history of their organization. The red carpet, which extends from front entrance to reception desk at the back of the shallow building, serves this purpose. It also serves the more prosaic purpose of guiding customers directly to the source which can direct them to the particular officer of the companies who can best serve the differing needs the companies meet.

But the effect of luxury and friendliness is given from the moment the visitor approaches the building. Here is a sheer-sided,

Sheer glass front of building is backed by vertical blinds at second level.

Executive office stresses the relaxed, homelike note apparent throughout building.

glass-fronted building, plain and simple in design, rich in color and texture. For immediately above the ground floor of this modern building in a traditional Southern town are sweeping tinted glass windows relieving the severity of the facade and, incidentally, relieving the effect of sunlight on the interior.

As the visitor enters, he starts down a straight path to the reception desk at the rear of the building on an actual red carpet. This carries out the note of luxury and also serves to direct him. Psychologically, no matter how attractive the brightly colored desks and reception desks in the open main wing of the building on his right may be, his steps are directed toward the reception area where he may be directed to the officer responsible for the particular activity of the Louisiana Companies which interests him.

This direct channel is reinforced by the fact that the wall, suitably relieved by long, low planter and fountain on one side and an attractive but complete barrier on the other side, also serve to channel him to reception.

Beyond the barrier, a large open well extends the length of the building. On one side, glass fronted executive offices, separated by normal ceiling-height partitions are open at the top to contribute to the air of space and light that is so notable a characteristic of these bayou offices. These offices are at the front of the building. On the other side, as the visitor turns and surveys the building lengthwise, are two tiers of offices, the lower group having ceilings topped by a balcony reached either from the receptionist's desk, or a stairwell at the other end of the building.

Between the two is the completely open area housing the secretarial and clerical workers for this

Private offices differ throughout building, each reflecting tastes of occupant.

Overall view of building from balcony emphasizes air of openness and space.

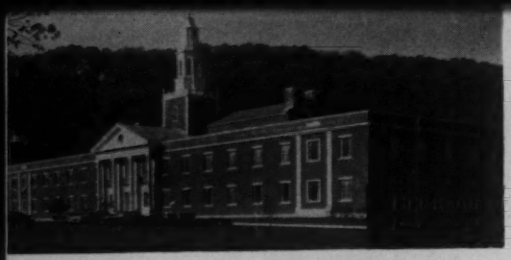
triple enterprise. Thus, the building through two-thirds of its depth has the air of serene openness first suggested at the entrance. And the softly shaded light offered by the tinted windows against the bright Louisiana sun supplies just the right setting for the brightly colored metal desks of the workers in the main well of the building.

The private offices against the front and rear walls of the building carry out the note of brightness, richness and imagination so evident in every detail of this sparkling new Southern office. Individual taste has been followed in the decor of each office, and individual business needs considered. Although offices are glass fronted, they are separated by solid partitions, each of which houses further closet and storage facilities. Curtains can be drawn across the glass fronts whenever privacy is necessary.

At the rear of the building, two staircases lead up to the second level that contains machine accounting rooms, a lounge where employees can get hot drinks, sandwiches and snacks or eat lunches brought from home, and the real estate loan department.

Architects for the spectacular new building were Bodman, Murrell and Smith, of Baton Rouge.

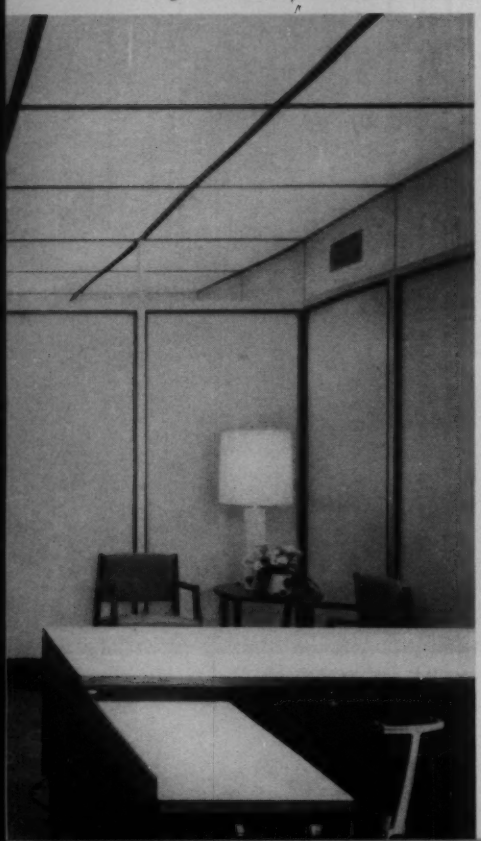
Smaller executive office is compact yet comfortable.



Berkshire Life Insurance Company

Pittsfield, Mass.

ABOVE: Live plants and pleasant furniture create comfortable atmosphere in executive reception room on second floor. BELOW LEFT: Secretary to treasurer has L-shaped work unit. BELOW RIGHT: Tiled corridor leads to Actuarial Department.



NESTLED in the hills of western Massachusetts near the town of Pittsfield, the Berkshire Life Insurance Co. building combines the traditional air of Georgian architecture in its exterior with modern design to fit the needs of today's business world in the interior.

Architects Hoyle, Doran and Barry drew up the plans for the two-story building, incorporating a portico with four white columns in the center, and topping the structure with the familiar cupola of colonial design. A broad lawn, graced by appropriate landscaping features, separates the Berkshire offices from the street, and the building is flanked by trees native to the New England countryside.

Advanced principles of modular design, using a 3-foot 6-inch partitioning system, are in evidence throughout the interior of the building. Solid banks of diffused fluorescent lighting are utilized in the general and executive office areas; the corridors and reception areas are illuminated by means of flush, circular ceiling lights.

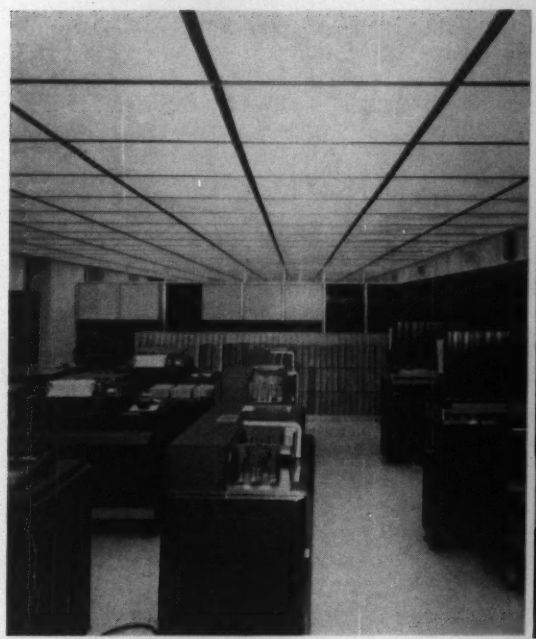
As a prime example of the flexibility offered by the module partitioning in the offices of Berkshire, one can look to the company's cafeteria-lounge. It is planned to function in various capacities. Besides serving as a cafeteria and lounge for the entire Berkshire staff, the room can also accommodate company social activities, such as dances and movies. Opened up to its full length, the space can handle approximately 450 persons. Yet it can be subdivided to hold groups as small as 20 people. The cafeteria proper is separated from the lounge area by a sliding glass wall.

Interior planning and decorating of the Berkshire offices was carried out by the New York firm of Designs for Business, Inc. under the supervision of Gerald Luss.

Office of the Year Award of Merit

(for offices designed for 300 or more employees.)

ABOVE: Executive office features sofa and modular partition walls.



ABOVE: Diffused lighting brightens IBM room (left) and general office area (right). BELOW: sliding glass wall separates lounge (foreground) from cafeteria (background) and permits room to be used by groups of 20 to 450 people.

Crown Zellerbach Corp.

San Francisco, Calif.

Office of the Year Award of Merit

(for offices designed for 300 or more employees.)

THE CROWN ZELLERBACH Building, San Francisco's first major edifice to utilize glass curtain-wall construction, reflects refreshing restraint.

Under existing zoning laws it could have been built 75 stories high; instead it ascends to an unassertive 20 floors. The vast majority of structures built on expensive downtown sites crowd every inch of the real estate, pushing right up to the boundaries; Crown Zellerbach's office occupies only a third of its one and one-third acre plot, the rest of it being given over to a landscaped plaza with a cobblestone terrace, sunken garden, sculptured fountain, and a greensward carpeted with English ivy and wild strawberries and dotted with three dozen or so full-grown trees.

Denying itself the immediate returns of maximum land utilization, Crown Zellerbach made a long-term investment in the human and cultural values of civilized San Francisco. In doing so, it set an example of good taste and self-discipline that can be ignored by avaricious real estate interests only at their peril. The building and the principles it embodies will be even more admired a quarter-century from now when the sidewalks and streets of most large United States cities will be overwhelmed by hordes of wilted-collar workers trudging to and from hive-like office buildings thrown up with no thought to population density.

The structure has two parts: a rectangular office tower and a service core in which the elevators ride, and in which cables, pipes and ducts for utilities are imbedded. With these earthbound facilities confined to the service core, floor space in the office tower is unbroken and unobstructed.

This "T"-plan of office and service facilities endows the Crown Zellerbach Building with two advantages, one highly practical, the other

Crown Zellerbach's 20-story building occupies only a third of its one and one-third acre plot in downtown San Francisco.

Executive office on one of the building's top floors faces the Oakland Bay Bridge, which connects San Francisco to Oakland.

highly aesthetic. With no elevator shafts or other immovable walls to construct layout possibilities, interior space in the office tower can be rearranged to meet changing needs.

The aesthetic benefits provided by the plan are derived from the fact that the office tower, being bound by no massive link to the earth, has an open-air first floor. This creates the illusion that the glass void is almost floating in the air, poised above the sunken garden and first-floor entrance and effortlessly supported by 18 steel columns.

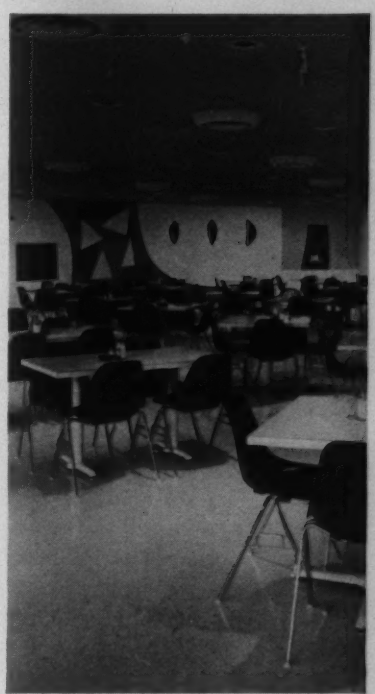
Each of the building's 16 office floors is 201 feet long by almost 70 feet wide, 15,000 square feet of unobstructed space. To take full advantage of the flexibility made possible by this openness, all ceilings are grooved for movable partitions by which interior space can be altered without costly remodeling. The basic module is 5½ feet, each unit self-sufficient in lighting, soundproofing, air-conditioning and telephone communication.

The building will accommodate about 2,000 people and the two-level garage under it has a 150-car capacity.

The lobby floor is of filled Italian travertine marble. The exposed sections of the 18 columns are shethed in hone-finished green serpentine. Matched Italian creamo marble cover the first-floor lobby walls. The remaining elevator lobby walls are of unpolished Italian travertine marble; polished marble of the same type cover reception area partitions. Walls are sand-finished plaster; wood panelling throughout is walnut veneer; ceilings are acoustical plaster.

The building is encased in glare-reducing blue-green glass, with horizontal spandrels at each floor of a deeper bluish-green glass. The vertical window mullions are polished aluminum. Umber-colored Venetian mosaics cover the exterior walls of the service core.

Many original paintings by San Francisco artists adorn Crown Zellerbach's office walls.



Cafeteria contains Mark Adams mural.

People's Drug Co., Inc.

Washington, D.C.

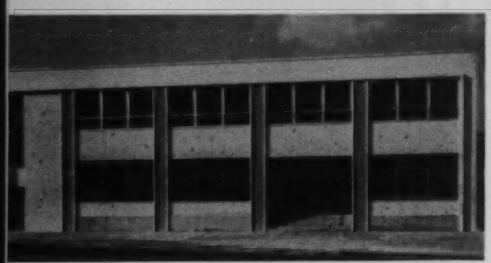
Office of the Year Award of Merit

(for offices designed for up to 300 employees)

HOW MANY executives have wished, as they were besieged by eager sellers or callers on returning to their offices, that there were some entrance that would eliminate the necessity of their crossing a crowded reception area?

The officers of People's Drug Co., in Washington, D. C., obviously have. That's why their new building, an ex-warehouse converted into the smartest and most modern of new offices, has three separate entrances – one for visitors, one for employees and purchasing personnel, and one – which can only be opened by key – for officers of the company.

The three entrances in the completely reconstructed tile facade of the building have another cardinal virtue: they channel particular visitors or employees directly to particular areas, eliminating entirely the traffic through departments that used to plague People's in its former quarters across the street in downtown Washington.



The fact that the new offices are housed in what was formerly a warehouse would never be suspected by either the passerby, seeing only the exterior of the "new" building, or the visitor entering it. The entire facade of the building has been reconstructed of tile, walnut, and granite. The main reception area, which houses the hundreds of salesmen calling on the chain drug company in the course of the day, is spacious and comfortable, equipped with couches, easy chairs, and magazines. A corridor beyond the door opening off reception leads directly to the buyer's offices, which are equipped with display rooms where salesmen may show their products to best advantage. All this area is kept quite separate from other working areas of the office, so that not only is there less employee traffic; traffic by visitors to the office is kept at a minimum except in the departments dealing with outside salesmen.

Similar operations are grouped together throughout the building. General offices, which have least contact with visitors from outside are housed on the second floor, with the executive area, purchasing, advertising, and cafeteria on the first floor. The first floor is partitioned to channel traffic; the second is open.

Interior arrangements in the reconstructed building were planned by Robert Gad, planning director of the Shaw-Walker Co., in cooperation with a committee from People's Drug. Architect for the conversion was Arthur Anderson, Washington, D. C.

Tasteful furniture and ceiling-to-wall drapes contribute to the atmosphere of the president's office at People's Drug.

General offices, which have least contact with outside visitors, are housed on the second floor of the converted warehouse.

Expansion space in the IBM room (above) has been worked out to provide for additional units of electronic equipment.

Private offices feature harmonizing wooden furniture.

Walls of the Board Room are paneled in wood.

Night view (above) shows how darkness enhances the building's beauty.

Reflecting pool (above) and open well lobby (below) are other unusual features.

Reynolds Metals Co.

Detroit, Mich.

A JEWEL on stilts – That's the phrase Detroiters use to describe architect Minuro Yamasaki's new and unique building for the Reynolds Aluminum Company's Great Lake sales office.

Skeptics, before the building was opened, had other harsher words for it. It would never work they insisted. One couldn't build a building like this without a center core; a building with nothing in the center but a glass skylight supported on aluminum rods–an open three-story building which was all deep balconies at second and third levels.

The evident success of the new Detroit structure located on the outskirts of the Midwestern city, has disproved the theories of the skeptics, earned the praise of the esthetes.

And it's a working office: efficient, effective, practical, and pleasant.

The jewel on stilts effect? Nothing could be more effective, both esthetically and practically. Detroit can be hot in summer; the sun can be glaring. Yet natural light is pleasant, and it seems a waste, when building a structure isolated from other buildings, where an abundance of natural light is available, to eliminate it.

Office of the Year Award of Merit

(for offices designed for up to 300 employees)

Solution: construct a glass curtain wall building, and then protect the inhabitants against light glare and heat by extending a grilled metal facade – of aluminum naturally – five feet from the walls to break the direct rays of the sun, while still

Second- and third-floor conference rooms are arranged around the central court.

All upper floor offices are on the exterior of the building. Luminous ceiling is divided into squares.

admitting abundant natural light. The five-foot overhang, which starts at the second level, effectively protects the top stories, too, against the sun's rays.

Deliberately designed as an architectural advertisement for aluminum as a building material, the gold-colored anodized aluminum sun screen is only the first indication of the versatile metal's many uses. The railings on the first floor, doors within the building, panels in the curtain walls — all are aluminum as well.

Inside the building, the first floor is entirely open: offices are clustered on the balconies, which form the second and third levels of the building and surround the open well on all four sides. The first floor receives natural light from the immense skylight topping the open center well.

Thus, everybody has the benefit of natural light, and an air of space: executives through their exterior offices; clerical workers through their stations on an open inner well.

Mounted on a four-foot-high podium of white terrazzo completely surrounded by a reflecting pool, the "jewel on stilts" has a setting worthy of its beauty—and furnishes a spectacular and dynamic display to attract the interest of the motor capital to the light, strong metal which it seeks to sell.

Some second-floor secretarial areas face outside. Desks are black, white, and natural aluminum.

1960 "OFFICE OF THE YEAR" EQUIPMENT SUPPLIERS

Southland Life Insurance

Adding and Calculating Machines:
Monroe.

Addressing Equipment:
Addressograph, IBM Tabulating.

Air-Conditioning:
Carrier.

Bookkeeping and Accounting Machines:
Remington Rand, Burroughs, NCR.

Duplicating and Copying Equipment: Rectigraph, Multilith, Verifax.

Electronic Accounting Equipment:
IBM "650" Tape RAMAC.

General Office Furniture:
General Fireproofing.

Mailroom Machines:
Pitney-Bowes.

Movable Partitions:
Hauserman.

Punched Card Equipment:
IBM.

Typewriters:
Royal manuals, IBM and Underwood electrics.

The Louisiana Companies

Adding and Calculating Machines:
Remington Rand, Underwood.

Air-Conditioning Equipment:
Redi-Power.

Bookkeeping and Accounting Machines:
IBM.

Duplicating and Copying Equipment:
Gestetner, Apeco, Thermofax.

General Office Furniture:
General Fireproofing.

Mailroom Machines:
Pitney-Bowes.

Punched Card Equipment:
IBM.

Typewriters:
IBM.

Berkshire Life Insurance

Air-Conditioning Equipment:
York.

Duplicating and Copying Equipment:
Multilith, Copease, Haloid.

Electronic Accounting Equipment:
IBM.

General Office Furniture:
Domore, Art Metal, Globe Wernicke.

Mailroom Machines:
Pitney-Bowes.

Movable Partitions:
Aetna Steel.

Crown Zellerbach Corp.

Adding and Calculating Machines:
Friden, Monroe, Olivetti.

Addressing Equipment:
Addressograph.

Air-Conditioning Equipment:
Carrier.

Bookkeeping and Accounting Machines:
National Cash Register.

Electronic Accounting Equipment:
IBM.

General Office Furniture:
Art Metal.

Mailroom Machines:
Pitney-Bowes.

Movable Partitions:
E. F. Hauserman.

Punched Card Equipment:
Friden, IBM.

Typewriters:
IBM.

People's Drug Stores, Inc.

Adding and Calculating Machines:
Remington, Burroughs, Comptometer, Underwood, Victor, Friden, Marchant, Monroe.

Addressing Equipment:
Addressograph.

Air-Conditioning Equipment:
York.

Bookkeeping and Accounting Machines:
NCR, Burroughs.

General Office Equipment.
Emeco, All-Steel Equipment.

Mailroom Machines:
Pitney-Bowes.

Movable Partitions:
General Plywood Executive Units.

Typewriters:
IBM, Royal.

Reynolds Metals Co.

Adding and Calculating Machines:
Marchant, Friden.

Air-Conditioning Equipment:
Carrier.

Duplicating and Copying Equipment:
Apeco, Bruning Copyflex.

General Office Furniture:
Knoll, Art Metal, Muller Metals, Sheerline Design.

Movable Partitions:
Reynolds, Hauserman.

Typewriters:
IBM, Royal, Remington.

This modern lamp shade may be the final touch . . . but the beginning touch-of-taste was made when your All-Steel furniture came.

ALL-STEEL EQUIPMENT Inc., Aurora, Illinois

Desks • Chairs • L-units • Credenzas • Tables
Bookcases • Filing Cabinets • Storage Cabinets

Use Readers' Inquiry Coupon on Page 112

Savings are automatic, too with "AUTOMATABELS"

Start saving up to 10% *right now* with Ever Ready's new pin-feed automatic labels. These amazingly inexpensive "Automatabels" have refashioned automatic labeling and proved a considerable savings for banks, insurance firms, schools, government agencies and virtually every type of business. In three sizes, thrifty "Automatabels" will operate smoothly and effectively in *every* business machine with a pin-feed platen or tractor feed, and in addition, are used extensively in convenient roll form for all platen feed typewriters. "Automatabels" are pressure sensitive and will adhere to almost anything. Their adhesive provides a smooth-as-glass surface when applied to tabulator cards, assuring perfect operation. Ever Ready's 50 years of label experience guarantees the finest quality at quantity prices. Send coupon below today for more detailed information on "Automatabels" and Ever Ready's Label Idea Kit. "Automatabels" come in roll form and fanfolded packs.

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☐ Please send me Ever Ready's Label Idea Kit.

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COMPANY .....
STREET ADDRESS .....
CITY, ZONE, STATE .....

BOOKS

(*From Page* 10)

exposed for their actual communications value. "As a supervisor," the author explains, "your concern is to get along with your men and to communicate effectively with them. To meet these ends you must adjust your speech to their understanding. Although this may mean avoiding technical or literary language, it does not mean that you must become a complete conformist speaking only in clichés and popular slang. Your standards should be clarity and sincerity, and your techniques judged by those standards."

Throughout, the author exhibits a unique understanding of the problem of communications in business and industry, and presents the supervisor with his responsibilities in establishing a "face-to-face" communications center.

SUCCESSFUL OFFICE MANUALS: Dartnell Management Report No. 607. The Dartnell Corp., 4660 Ravenswood Ave., Chicago 40. $12.50.

This is a volume of more than 100 pages of precise information on building an authoritative office manual, by one of the country's most famous business research organizations. Dartnell Report 607 is designed to give management a "finger-tip" source of information on the planning and production of almost any type of office manual. Part One of the report, entitled "Planning the Manual," presents the company manual in its role of aiding job analysis, work simplification, standardization, training, policy, etc. The importance of an induction manual is also explained.

Part Two, "Writing and Producing the Manual," contains the information most needed in bringing the manual to fruition. Pointers on determining the size and format, and the most economical method of production are given with numerous straightforward suggestions on how each task may be expedited.

The third and final section of the volume is devoted to revising the manual. It includes a timely discussion on automation.

It's an education in office copying to see all this Kodak copier can do!

Jobs you never thought an office copier could do are "apple pie" for the Verifax Bantam. It whisks out copies on both sides of a sheet . . . on printed office forms . . . even makes translucent whiteprint masters. Main job, of course, is to give you 5 dry, easy-to-read copies of office records in 1 minute for 2½¢ each. Copies which are as accurate and long-lasting as originals!

VERIFAX BANTAM COPIER

$99.50

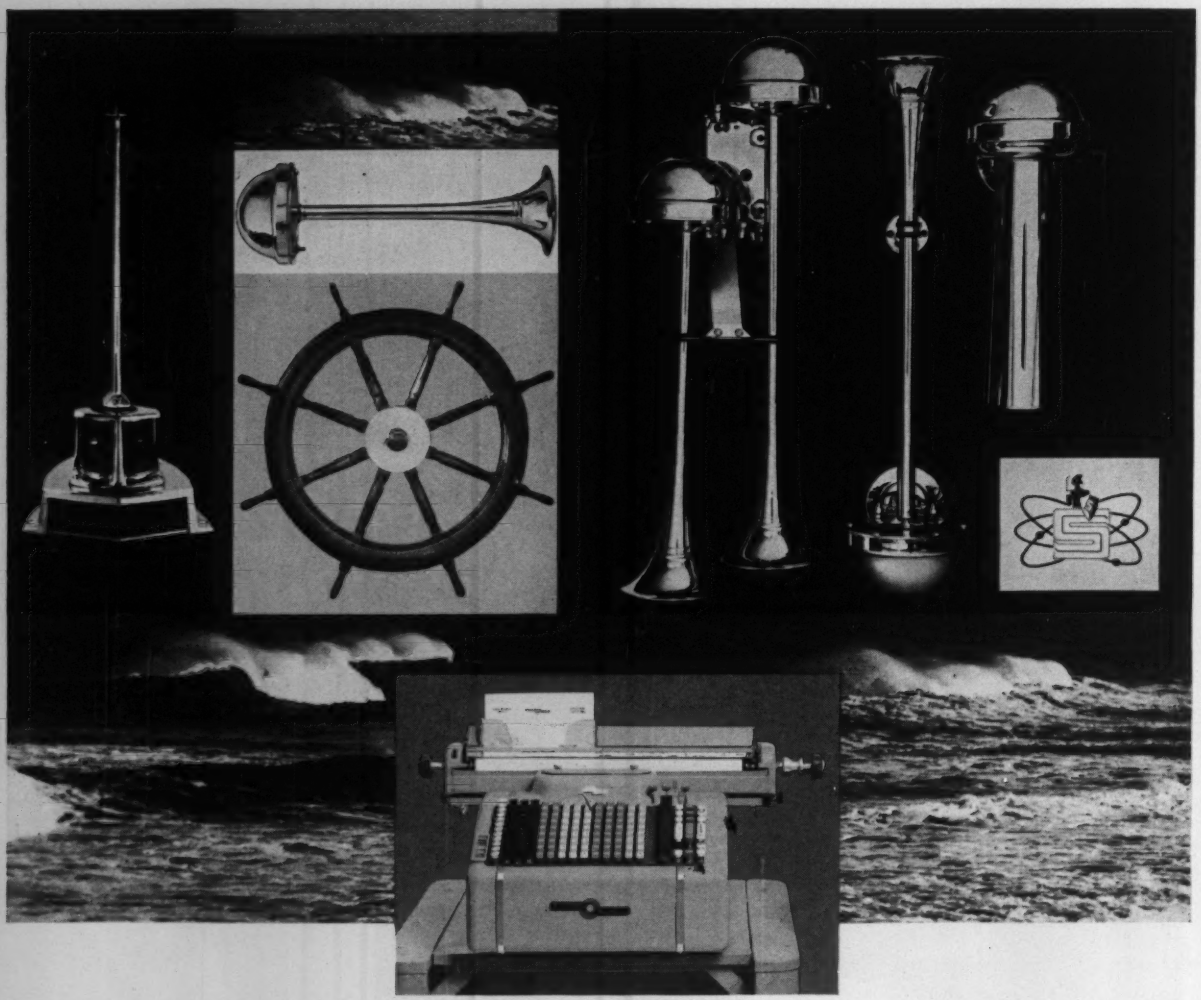
Other models to $425

Phone local Verifax dealer for demonstration (see Yellow Pages under duplicating or photocopying machines), or write Eastman Kodak Company, Business Photo Methods Division, Rochester 4, N. Y., for booklet describing all copier models.

Prices quoted are manufacturer's suggested prices and subject to change without notice.

Verifax Copying DOES MORE . . . COSTS LESS . . . MISSES NOTHING

Kodak
TRADEMARK



BURROUGHS ACCOUNTING MACHINES PAY FOR THEMSELVES IN ONE YEAR AT SPARTON CORPORATION

The scene: Jackson, Michigan, headquarters of the Sparton Corporation, manufacturers of marine warning signals, railway car loading systems, automobile and truck horns, and military electronics equipment. **The job:** payroll, accounts payable and accounts receivable. **The equipment:** four Burroughs F-300 Sensimatic Accounting Machines. **The results:** John J. Smith, President, says "These machines made possible such savings in our operations that they paid for themselves within the first year of use. Furthermore we could never make our closing dates without them."

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Sparton Corporation is one of many manufacturing concerns helped to peak efficiency by Burroughs data processing equipment. For details, action—and results—call our nearby branch today. Or write Burroughs Corporation, Detroit 32, Mich.

Burroughs Corporation

"NEW DIMENSIONS / in electronics and data processing systems"

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AMA speaker reports

"PHOTOMEMORY" DEVELOPMENT IN 60'S MAY EQUAL COMPUTER BOOM OF 50'S

NEARLY EVERYONE has been present, at one time or another, when a man has called in his secretary to "get me that contract from whoozis—you know, the redheaded fellow I wrote to last year, or maybe it was in 1957, about whiffletree rings or maybe it was oxcart wheels."

Shortly thereafter, the girl produced the desired paper which wasn't a contract, didn't mention red hair, and was dated 1956.

The foregoing basic example of information retrieval—the process of securing data by association of facts rather than search of indices—was cited by John Waddell of Chicago Title and Trust Co. in a speech before the sixth annual conference of the American Management Association, held in New York, February 29-March 2.

Acknowledging that "information retrieval" is common necessity in daily office activity, Waddell pointed out to those assembled at the conference in New York's Statler-Hilton Hotel the possibilities of using photomemory computer units to search for the most probable "answer" to such requests for data.

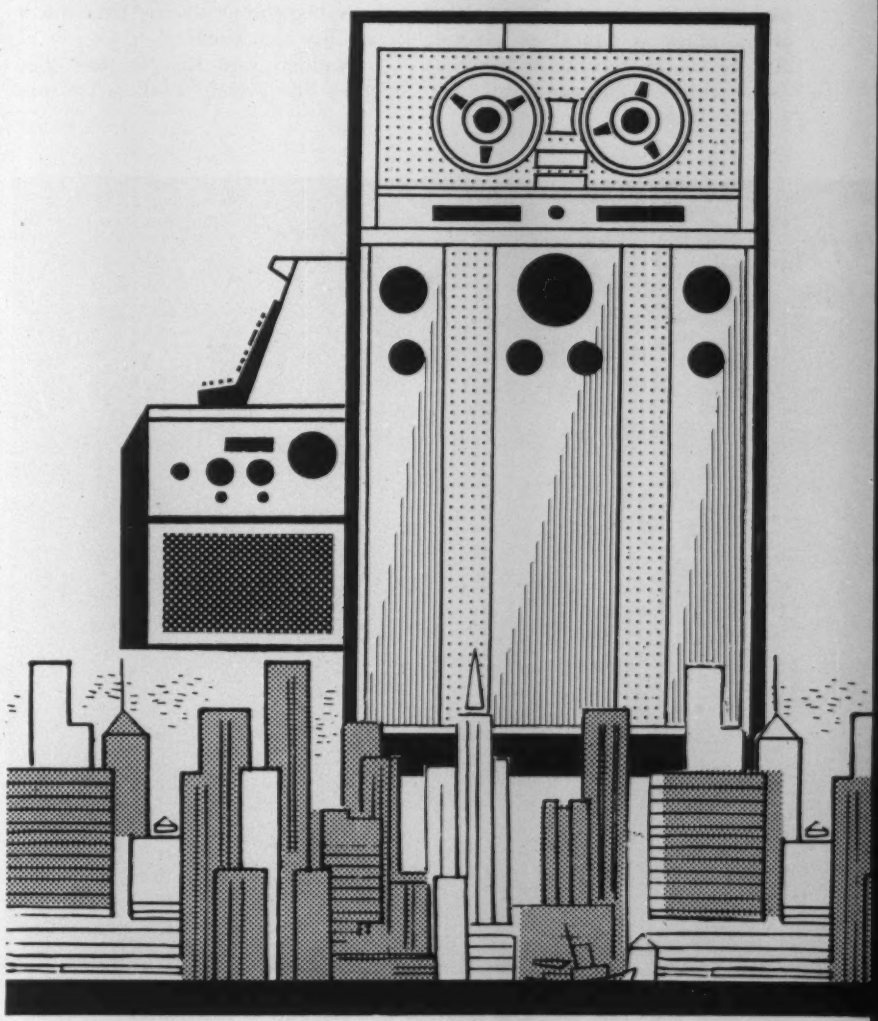
"A great deal of information," Waddell said, "is best presented to the user in terms of the original source document or a reproduction of such a document." Waddell cited correspondence, contracts, mortgage loan applications, and credit files as prime examples of information best presented and assimilated in miniaturized graphic form, on microfilm, for instance.

"All these," reported Waddell, are information of a type that is just not suitable for storage in ordinary computer memory systems. There are just too many details for effective use of data processing equipment."

But having the information somewhere in a reel of film or in a file makes the prospect of finding it at electronic speeds very appealing, according to Waddell. This brings up information retrieval as a very practical need—a need which can be satisfied by developing random access to such stored material by means of photomemory units, he said.

"I do think I can say that the possibilities inherent in photomemory are so great that in the 1960's we will see developments equivalent to what has happened in the 1950's in the case of computers," declared Waddell.

If we can get high-speed random access to any document of the type that does not lend itself to condensation in computer memory by combining photomemory with computer memory, indicated Waddell,



"We cannot possibly hook a tape to every typewriter . . ."

we will avoid two of the serious limitations of the computer: the economic size of the electronic memory and the practical limits on input.

"Let's consider the economics of size of electronic memory," suggested Waddell. "For our own use in considering the feasibility of a computer application," he said, "we calculated that the cost of storing essential facts about a deed on magnetic tape was 500 characters per dollar, and that we could get about 25,000 characters per cubic inch.

"But," he continued, "using photographic data processing methods, we would get 1,000 characters per dollar and 2,000,000 per cubic inch."

As to practical limits on input, he went on, one can consider a deed or mortgage as typical of a whole class of source documents. In these cases, said Waddell, the public generates the source of input, and "we cannot possibly hook a punched paper tape to the typewriters in every law office. Furthermore," he continued, "some people handwrite deeds. The only way to get the information into digital form is to copy it."

Film chips offer possibilities

Therefore, Waddell surmised, the advantages of copying the whole document by pushing a camera exposure button are very appealing. "We have been carrying this out for quite some time," he explained. "A study of our information problem by an independent research organization has confirmed that the solution of our problem lies in the use of photography, and we have become more sure that this is so since that time."

Waddell said that he has high hopes that present work being done by manufacturers on information retrieval systems will offer the methods of getting photo-processed data out of storage at high speeds for reference purposes. "So we will continue to progress in the field of photo data processing," he told the conference.

"How can this be done?" he queried. "First, it is evident that a strip of non-graphic data can be put on film. Also, it is clear that we can consider indexing right on the film in the form of a magnetic stripe or an optical stripe."

"But so far as I know," he went on, "the stripping of a reel of film offers little potential in photo data processing because all the problems of magnetic tape are intensified when the tape is in photographic film. It seems that there is much more room to progress by using simple miniaturization methods, particularly by using "film chips."

Waddell said that a small film chip (16 by 32mm) is able to contain the equivalent of the data contained in several punch cards. Such film chips with optical spots, he said, can be translated into electronic signals just as though the spots were holes in a card or paper tape.

Stressing the increasing significance of film chips, Waddell suggested that "you get ready to hear almost as much about them in the future as you have about punched cards." He listed the following as advantages of these items: they can contain both graphic and digital material; they are discrete record units; they have high information capacity; they can be duplicated; they can be sorted, searched and inter-filed by machine; they are directly usable for projected images; and their digital information can be compatible with other machines such as electronic computers.

Waddell pointed out that another big advantage of the film chip is that it lends itself to sophisticated filing techniques. "In other words," he said, "you can store the same data more than once in different sections of the total file and reduce the machine time devoted to search." Furthermore, Waddell noted, it is possible to have modified copies of the information, each with different

Electronic equipment exhibition absorbed free moments at conference.

Free Timesaver!

Handy desk dispenser keeps "SCOTCH" BRAND Cellophane Tape at your fingertips for dozens of mending, sealing, protecting jobs. Sturdy metal dispenser is weighted to let you pull off and cut tape with one hand. Uses thrifty 1296" rolls of tape!

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DEAL "S": same as above, but with 12 rolls ½" x 1296" tape.

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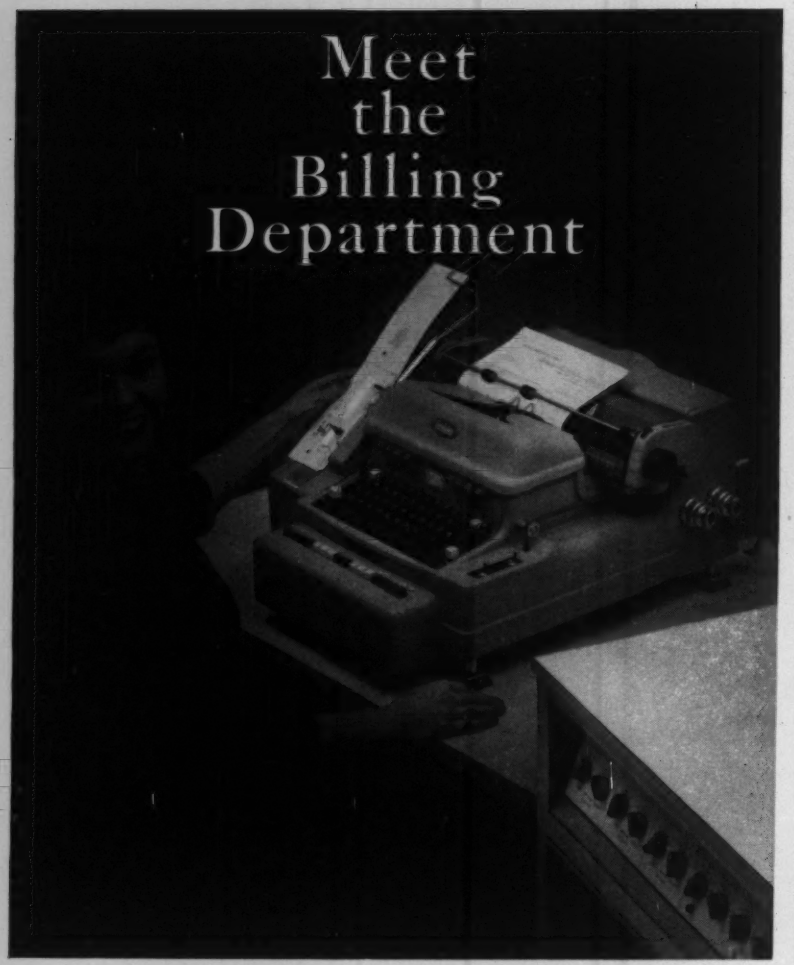

This is a Friden CTS Computyper. The girl who runs it can turn out an amazing number of invoices and still have one of the easiest jobs in the office. Together, she and the machine comprise a complete billing department.

Utilizing edge-punched cards which contain constant data, the CTS writes the heading and line items at a speed of 100 words per minute. It stops automatically to let the operator fill in order number and item quantity. Extensions, discounts, tax computations, and totals are figured and typed on the invoice automatically. Grand totals are stored in the machine and may be printed at any time.

As the invoices are prepared, the CTS automatically punches selected information into a by-product paper tape for subsequent data processing such as direct conversion to tab cards. Or, the CTS itself may directly control punching of tab cards as *another* automatic by-product.

We call this PRACTIMATION: automation so hand-in-hand with practicality there can be no other word for it. For complete information, call your Friden Systems Man or write: Friden, Inc., San Leandro, California.

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Key: Idea association

digital indexing. "This capability for modified duplication means a file could be updated by adding a new graphic image in the process of duplicating an existing chip."

After summarizing this method of storing graphic data, Waddell again touched upon information retrieval. "Today, men are working to develop systems which will identify information by association of ideas rather than search of indexes," Waddell declared. "But to inspect the actual equipment in use it's necessary to get inside of the Pentagon or other government agencies or to visit the manufacturers."

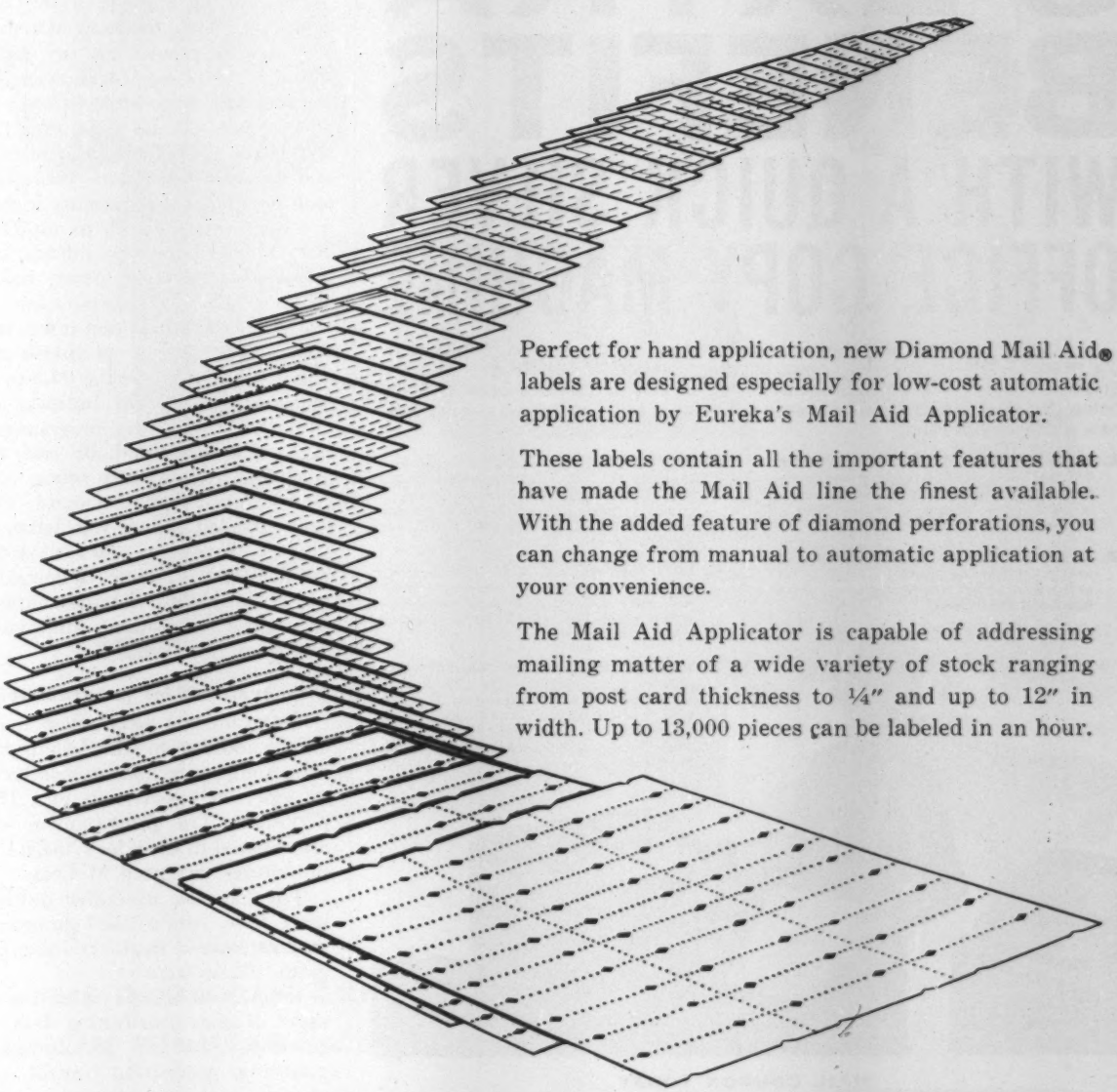
"So far, one manufacturer has advertised that a file of chips can be searched, i.e. the digital information on each chip read, compared and logical decisions made within the electronic components of the equipment at a rate of 20 chips per second," said Waddell. "In December, 1959, another manufacturer announced that chips could be scanned at a rate of 1,000 per second. On the other hand, I have no information on how much comparing of computer logic can be expected while the chips are flying past a reading head at the higher speed."

Waddell stated that some of the equipment is still in the form of prototypes and that some is yet in the system design stage where speeds and capacities are not limited by practical economics.

Mr. Waddell was one of several speakers at the three-day gathering, which also included a panel discussion and opportunities to view the latest equipment in the field of data processing. Some of the other speakers and their subjects were: K. J. Soderstrom, Corn Products Co., "Data Processing as a Major Aid in Business Decision Making;" Donald M. Hart, Moore Business Forms, Inc., "The Investigation of System Deficiencies"; Paul Wield, Shell Oil Co., "Data Processing Moves into the Area of Control"; and F. R. McCrea, Chrysler Corp., who spoke on Chrysler's experience in the installation of data processing equipment.

(*To page* 60)

LOOK FOR THE DIAMONDS



Perfect for hand application, new Diamond Mail Aid® labels are designed especially for low-cost automatic application by Eureka's Mail Aid Applicator.

These labels contain all the important features that have made the Mail Aid line the finest available. With the added feature of diamond perforations, you can change from manual to automatic application at your convenience.

The Mail Aid Applicator is capable of addressing mailing matter of a wide variety of stock ranging from post card thickness to ¼" and up to 12" in width. Up to 13,000 pieces can be labeled in an hour.

Your stationer soon will have regular numbers of Dupli-Stickers®, Dupli-Snap®, and Dupli-Quik® labels with diamond perforations. Remember — even if you plan to continue manual application — Diamond Mail Aid labels are your best buy.

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YOU GET THESE 5 EXTRA BENEFITS WITH A QUICK SILVER OFFICE COPY MACHINE

This general-purpose office copy machine will handle all your routine copying needs — letters, invoices, news clippings, reports — **anything** — with the greatest of ease. And, Quick Silver will also give you all the **extra benefits** listed below. No other office copy machine is so versatile as Quick Silver, a completely new photocopy process.

1. **UNLIMITED NUMBER OF QUALITY COPIES FROM ONE MASTER.** And every copy of the same high photographic quality. File the master and make additional copies from it whenever you need them.

2. **INEXPENSIVE COPIES.** Quick Silver copies are only 5 cents each! Only a single sheet of paper is used; the throw-away sheet has been eliminated.

3. **FAST COPIES.** Designed for volume, one Quick Silver '300' machine with a single operator will turn out the same number of copies per hour as two transfer machines and two operators! Naturally, that means more production for less money.

4. **PAPER NEGATIVES FOR OFFSET PLATES.** In 25 seconds and for only 5 cents Quick Silver will make a negative in your own office which would cost you $1.50 if you sent it out to be made.

5. **WILL COPY HARD-TO-COPY ORIGINALS.** Not only that, but Quick Silver can make a good copy from a blueprint or a photostat. It will make a copy of a copy... even a heat-transfer copy! And it does it in one pass through the machine, with no intermediate step.

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☐ I'd like more information about Quick Silver. Please send your FREE folder.

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OM-5

The selection of personnel and the establishment of an operating organization were the most important actions which Chrysler had to undertake in establishing its corporate information processing center, according to Mr. McCrea.

"Putting in a large scale IBM electronic data processing system is a unique experience for any organization," McCrea acknowledged. "Installing a large binary computer at Chrysler was no different. The translation of systems from manual and less powerful data processing tools to a large scale electronic data processing system such as an IBM 709 called upon new talents and uncovered problems never before encountered in our corporation."

McCrea explained that it was very difficult for Chrysler to obtain programmers having specific data processing experience for business systems. Several of the programmers the company selected, he said, did have experience with other computers and business systems. This programming group was balanced with several persons who were strong in Chrysler's systems undertaking and with individuals with computer experience in other automotive companies.

Dual training for programmers

"Programmers were given a formal schooling in this computer's programming technology conducted by Chrysler supervision and IBM personnel. The programmers were also trained in Chrysler's 'main line' procedure," reported McCrea.

The Chrysler executive outlined three basic "main line" procedural systems covered in the training program. These were:

1. The basic system embracing the input of sales distributing data, engineering and/or pre-production planning, production control, purchasing and manufacturing planning, and assembly plant and sales division functions. Also the basic methods of handling this data through the entire "sales forecast to the sales reporting" cycle.

2. The basic methodology used in the payment of all employees, with related controls and statistics.

3. Profit planning, facility planning and general and administrative and manufacturing expense budgeting.

(*To page* 63)

Model shown $1,275.
Typewriter extra.

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IN MINUTES *and know that his new Auto-typist pays for itself in 4 months*

How would you like to have personally typed letters turned out 2½ times the speed of the fastest typist? neat, erasure-free, error-free? With Auto-typist, one average typist can easily do 100 to 125 letters each day—three or four times her normal typing output.

Your return on initial investment is good. The price of a standard model Auto-typist, as low as $900, is equal to the salary of an average typist for *only four months.* That's economy, even in the short run! Think of your savings!

Operation is simple and foolproof. Precomposed letters, or separate paragraphs, are perforated on a wide tape roll and numbered to correspond with the pushbuttons on the panel. Then Auto-typist automatically picks them out, and types them in correct sequence every time! Send coupon for new Second Edition, "Sixty Best Business Letters" and complete Auto-typist information. Clip coupon at right.

Auto-typist

AMERICAN AUTOMATIC TYPEWRITER CO.
Dept. 145, 2323 N. Pulaski Rd., Chicago 39

Gentlemen:
Please send me full information on Auto-typist with new Second Edition of free booklet "Sixty Best Business Letters."

Name .....

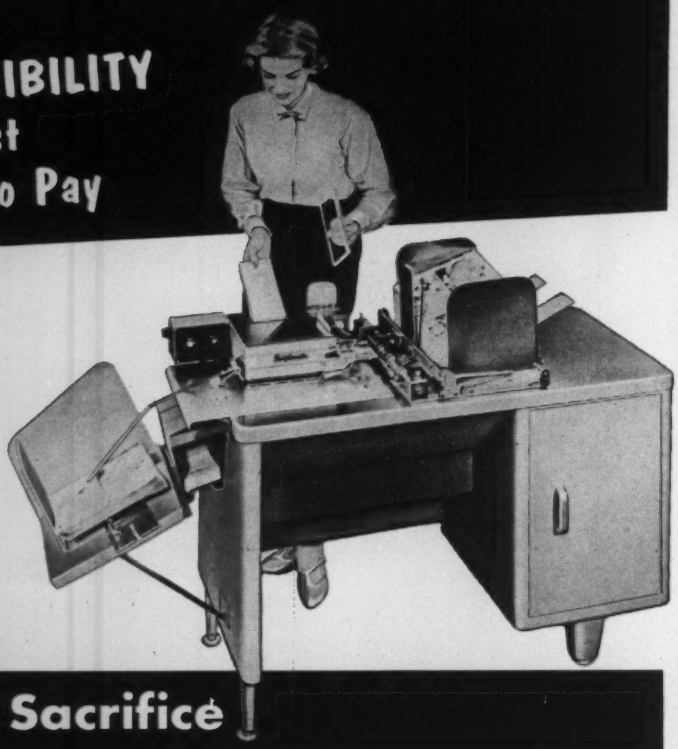
Title .....

Company .....

Address .....

City ..... Zone ..... State .....

LIST SELECTION . . . and ADDRESSING FLEXIBILITY At a Fraction of the Cost You'd Expect to Pay



SCRIPTOMATIC MODEL 10-S ADDRESSING MACHINE

Designed to bring automatic list handling and addressing selectivity within reach of every mailing list user. Dependable electronic sensing feature permits the Scriptomatic Model 10-S to selectively address and count simultaneously without disturbing file sequence. This is a big order for moderately priced addressing equipment, but you get all this and more in the Scriptomatic Model 10-S!

BIG Savings...at No Sacrifice in the Jobs You Want to Do !

The Scriptomatic Addressing and Data Writing System represents the "perfect marriage" of punched card records and addressing equipment. The Model 10-S simply reads the notched edges of any card and prints from it or skips it according to program. Masters are made easily by any typist and electric typewriter in a fraction of the time required to make stencils or plates. Dollar savings are as drastic as the cost of paper versus metal, with extra bonuses in lower labor requirements and up to 75% less filing space.

Some Scriptomatic users have saved enough to pay for the system installation in the first year. Naturally, they are "heroes" in their companies and you can be, too! Write today to Scriptomatic, Inc., 1111 Vine Street, Philadelphia 7, Pa., for detailed literature and the name of your nearest Scriptomatic representative. Chances are, we have some specific Scriptomatic case histories in your field.

WHAT IS SCRIPTOMATIC?

A refinement of the chemical transfer process, by which the data to be reproduced is imprinted on the reverse side of the card master as it is being typed. Precise fluid and pressure controls on Scriptomatic Addressing Machines insure high quality legibility and long life for the masters; up to 200 or more impressions, the equivalent of many years of normal list usage. Masters become an integral part of any card filing system and fit right in with any card handling equipment.

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Scriptomatic Master Card Writer

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Modern Addressing—Data Writing Machines and Methods

S1000

Use Readers' Inquiry Coupon on Page 112

Organization split into programming and administrative groups

(*From page* 60)

McCrea then outlined the second major problem that Chrysler faced while installing its data processing system—the development of an organization that was flexible enough to handle the problems related to all three phases of the program: that is, pre-installation, installation and post-installation of the computer.

"Our first operating organization was divided into two major segments," McCrea stated. "One segment, the programming group, dealt with programming the applications selected for the computer. This group was divided into four teams, each dealing with a specific application."

"The second active organizational segment," McCrea went on, "was the administrative group. This group was primarily interested with the preparation of the site and the establishment and execution of the conversion plan from existing systems to the electronic data processing system. It also developed the plans necessary for the orderly centralization of many functions from plants scattered throughout the United States."

In addition to these two groups, McCrea explained that a program review board was set up to perform such reviews as were necessary to insure that a program was ready for the computer. As the installation time approached, McCrea continued, the computer operating staff was formed. Most of the personnel in this area were selected from within the corporation.

"Last September, after five months of operating experience, we developed our present organization," McCrea told the conference. "This operational experience with the equipment pointed out certain needs that we had not anticipated in our original planning. The most significant dealt with the responsibilities of scheduling and control. Our current organization includes a larger scheduling and central control section with the responsibility for the control and scheduling of input and output to and from the computer, and electric accounting machine section from and to other segments in the corporation."

Three main applications

According to McCrea, Chrysler has, at present, three major applications of the computer. These are: vendor releasing, hourly payroll, and production reporting.

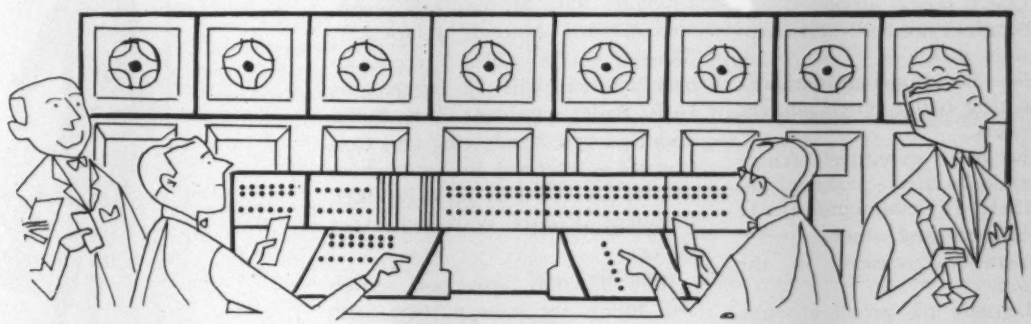
It was felt that vendor releasing was the key to an understanding of the entire information system in the Chrysler production cycle, McCrea said. He declared that the vendor releasing system designed for the IBM 709 was substantially the same as those systems being employed in intermediate-size data processing equipment.

"The hourly payroll system required a considerable amount of effort in terms of systems design and conversion from manual and partially automated systems to the 709 system," McCrea continued, "It was decided that a schedule of conversions would be developed and the entire conversion would be phased out over a period of about nine months.

"At present," he went on, "approximately 75,000 persons are being paid on the computer. When the entire Chrysler hourly payroll is placed on the system, the total should exceed 80,000 employees."

McCrea said that the production report system is essentially a way of reflecting the status of each unit in schedule for production, each unit in production, and the status of each unit built and shipped to dealers. It involves the counting of major components so that production control can quickly analyze the component requirement as related to the current schedule. "We are still engaged in major conversion work in the production reporting area," McCrea stated. "At the present time, reporting for several of the assembly plants is being prepared on the system. It is hoped that in the near future we may have all the reports for the Detroit area on the central system."

Chrysler is presently engaged in a second look at systems for hourly payroll, vendor releasing and production reporting systems in order to take advantage of the logic of a binary computer. Modifications under consideration are directed, according to McCrea, at the use of integrated data processing in order to relate these applications to other areas: sales, personnel, labor relations and purchasing.



TWELVE "OPEN FORUMS" WILL LAUNCH NOMA CONFERENCE IN MONTREAL

THE 41ST INTERNATIONAL Conference and International Office Exposition of the National Office Management Association will depart from the pattern of previous years by featuring concurrent workshop sessions.

On the afternoon of the opening day, Monday, May 23, the only general program session of the conference will be held in Montreal's Queen Elizabeth Hotel, scene of the gathering. A panel group of three speakers will discuss the general topic, "Your Office of the 60's," with each one covering a particular phase of the subject. The meetings will break at 3:30 to permit registrants to attend a special preview of the exposition.

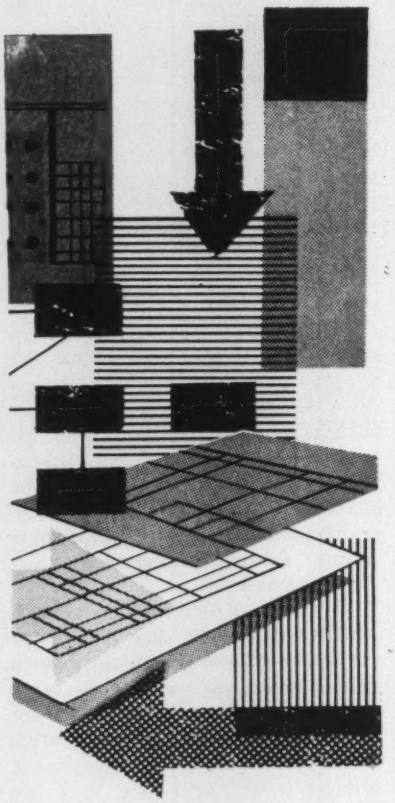
During the evening, twelve "Open Forums" will be held. The forums, each of which will be headed by a discussion leader, will be conducted in workshop fashion, and will be limited to an attendance of fifty. Subjects to be covered include:

1. Supervisory problems in the office.
2. Planning for the moving of your office.
3. New equipment—buy or lease.
4. Data processing – reducing to practice.
5. Office cost control.
6. NOMA salary survey.
7. Technical surveys—their adaptation, their use.
8. Office building maintenance.
9. Writing better letters and/or reports.
10. The office executive's fringe responsibilities – parking lot, cafeteria, maintenance, car allowance and others.
11. Operations research in the office.
12. Magnetic ink—an office potential.

Similar concurrent sessions will be continued throughout the balance of the conference, although the number of registrants for any given session will not be arbitrarily limited as it is at the workshop meetings on Monday evening. Tuesday morning, registrants will have their choice of discussions on "Fewer Records—Better Custody," by M. G. Bastianello, systems analyst, American Radiator and Standard Sanitary Corp.; "Employee Orientation —A Continuing Program," which will be handled by J. F. Shafer, Manager, Supervisory Conference Program, Metropolitan Life Insurance Co.; "Office Services—How to Organize and Manage," which will be outlined by Marc Loder, manager, Office Services, International Latex Corp.; and "Administrative Functions—Their Organization and Management," to be covered by R. D. Armstrong, executive vice president, Chrysler Corp. of Canada.

During the second half of the morning, the four sessions to be held will cover Work Measurement —Techniques for Control," which will be discussed by C. L. Brisley, Senior Staff Consultant, A. T. Kearney & Co.; "How to Select and Train Office Supervisors," with P. J. Foley, Assistant Public Relations Director, State Mutual Life Assurance Co. of America as speaker; "X + Y − Z = Office Space Economy," which will be covered by G. R. Bailey, president G. R. Bailey and Co.; and "Budgeting and Cost Control – Planned Profits," which will be presented by R. E. Walker, president, Robert Walker & Associates.

The Tuesday afternoon session will follow the same pattern, with the first part of the afternoon given



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Service organizations, computers, personnel to be covered

over to discussions of systems and procedures, office pay patterns, and service organizations. A. A. Mackey, Director, Management Consulting Division, Price, Waterhouse & Co., will give the reasons why "Small Offices Need a Systems and Procedures Program," while N. J. Brown, vice president and controller, The Steel Company of Canada, Ltd., will talk on "Developing a Systems and Procedures Program—Larger Office." "Administration of Office Remuneration" will be the topic of N. L. A. Martucci, Supervisor, Industrial Relations Dept., Kennecott Refining Corp., while "Service Organizations Can be Your 'Second Staff'" will be the hopeful message of R. K. Friedman, Director of Headquarters Services, Post Office Department.

The second round of sessions on Tuesday afternoon will offer a varied menu of topics, ranging from the "Effect of Computer Installation on Organization and Personnel" to "Preserving Management Prerogatives in Union Relationships." The first subject will be discussed by G. E. Brown, vice president, Personnel, Sun Life Assurance Co., of Canada; the second by J. T. Dunlop, professor of economics, Harvard University. Other Tuesday afternoon speakers: F. S. Kilner, assistant manager, Graphic Reproduction Department, Canadair Ltd., and R. H. Markus, Managing Partner, Psychological Consultants to Industry. Their respective topics will be "Office Reproduction—The Technical Approach," and "Human Factors in the Office Environment."

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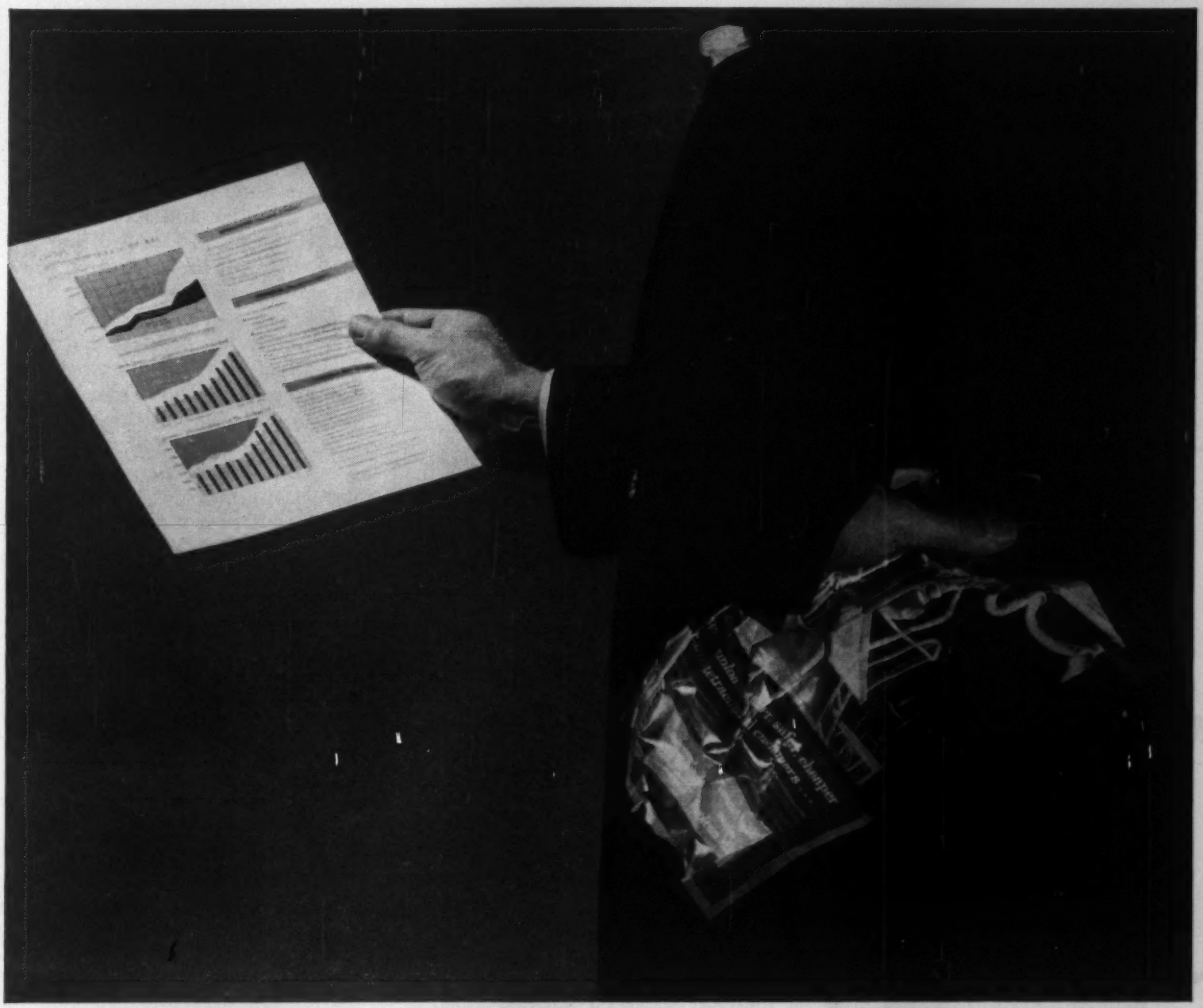
Psychiatrist to speak

Wednesday morning will be devoted to simultaneous sessions covering subjects ranging from adjustment to one's job to data processing feasibility studies for both small and large offices. The first group of talks includes "Unified Industrial Telecommunication," by H. W. Dean, manager, Office Services, Eastman Kodak Co.; "How to Live With Your Job," which will be discussed by Gerald Gordon, chief, Psychiatric Section, E. I. du Pont de Nemours & Co.; "Practical Office Equipment Management," by C. E. Summer, Director, Bureau of Methods & Procedures, Department of Public Works, State of New York; and "When Do You Delegate?", which will be outlined by W. W. Muir, president, W. Wallace Muir & Associates, Ltd.

The second half of Wednesday morning will be given over to the closing sessions of the convention. The four talks scheduled are: "A Data Processing Facility – Larger Office," to be given by L. J. Lacey, manager, Programming and Data Processing, Aluminum Company of Canada, Ltd.; "A Data Processing Feasibility Study – Smaller Office;" which will be outlined by J. R. Crowley, Corporate Systems and Research Coordinator, The Reuben H. Donnelly Corp.; "The Productive Years—A Changing Pattern," to be covered by E. N. Saveth, assistant dean, New School for Social Research; and "Developing and Managing a Forms Design and Control Program," to be covered by John



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Stubbs, district sales manager, Moore Business Forms, Inc.

Social events will include the annual banquet, to be held on Tuesday evening, May 24, and the closing annual luncheon, which will be held on Wednesday, May 25. In addition, a separate series of events have been planned for wives of NOMA members, including a one-day Laurentian Mountain tour.

The International Office Exposition will be held open for one day following the close of the conference on May 25. An innovation this year will be the scheduling of time for exhibitors to present broad treatments of areas of interest to office management: communications, data processing, systems and procedures, reproduction techniques, etc., in the form of films, demonstrations or discussion panels. Each exhibitor who wishes to participate will be limited to a thirty-minute program.

According to the NOMA sponsors, this whole program is a "new approach in the business show formula."

Other innovations at this year's conference: for the first time members and non-members alike will have the opportunity of registering only for the technical activities without attending non-technical activities to be scheduled, according to Walter Emmerling, president of NOMA.

Simultaneously with announcement of plans for the Montreal conference, NOMA has announced that the 1960 meeting originally scheduled for New York City, will now be held in St. Louis, May 7-10, 1961. The 1964 conference will be held in New York, in order to allow visiting members to attend the World's Fair set for the Eastern City that year.

Feuds weaken organization

(*From page* 22)

ing and import to each individual's own personal welfare. This means that even the most thoughtful and considered actions of the administrator are often misconstrued and the cause of unnecessary apprehension on the part of different members of the organization. This fact makes it easy to imagine the reactions of members of the organization to any arbitrary and capricious actions taken by the administrator. They may not be affected directly by the particular action but the result is almost the same so far as their attitude toward the administrator is concerned. They realize that capricious action, like lightning, may strike any place because it is uncontrolled and irresponsible action. The administrator who, out of anger, insists on teaching a lesson to the offender has a larger class than he thinks. He is also teaching more about himself than about the topic he thinks he is covering.

Administration by spite leaves its marks on the administrator in several ways. Soon he is carrying a chip on his shoulder and looking for a fight. If the people around him are worth their salt he quite often finds the fight he is spoiling for. The ultimate result is a weakened organization as the fighters move out of the organization and are replaced with those with less courage and strength. The administrator is unaware of the damage he is doing to his organization because he pictured those leaving as trouble makers. He sees himself as a man of good will and by this definition those who left the organization were not. He will also be unlikely to discriminate between opposition to his personal attacks on others and their opposition to his ideas. For this reason he will be prone to choose sides on problems and act from emotion rather than considered judgment.

Administrators who manifest rash and extravagant loss of temper may

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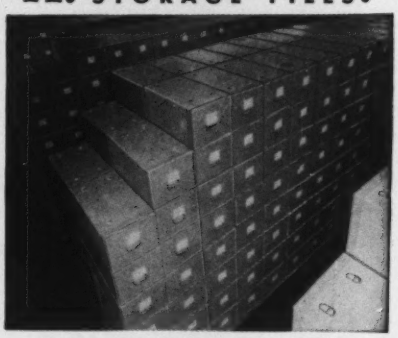

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All this at half the cost of steel because "CONVOYS" are heavy duty corrugated board processed to remarkable strength.

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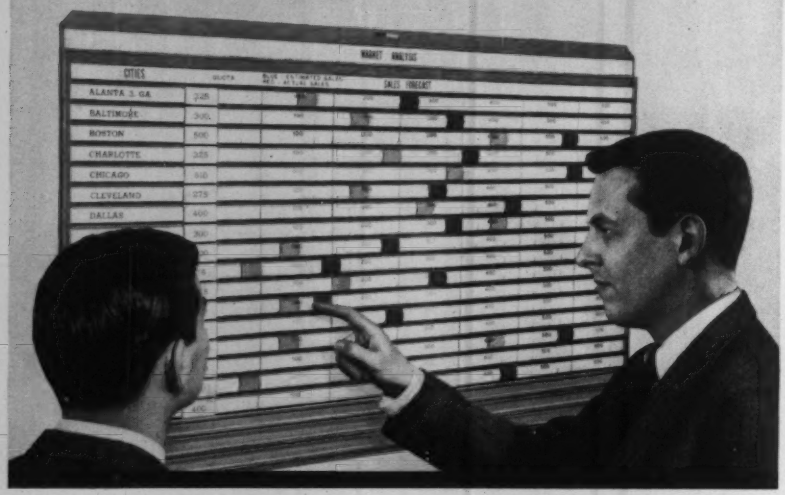

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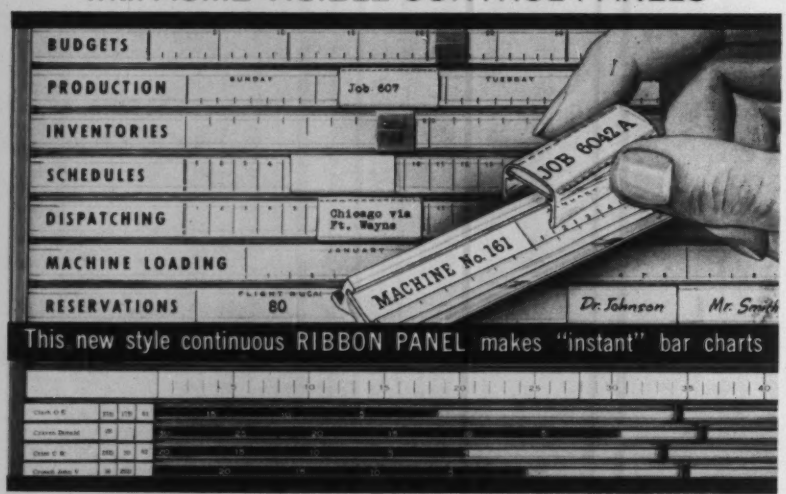

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Contrition holds perils

impair their exercise of good judgment in an opposite manner to those who hold grudges. Some individuals may demonstrate a spirit of contrition rather than retribution. All of us can recall times we have been ashamed of having lost our temper and the attack we may have made upon the person we blamed in our anger. This shame, and a sense of fair play, caused us to seek to make amends and to demonstrate that we were sorry.

Undue fear is harmful

This sort of reaction on the part of the individual who loses his temper is both normal and noble, and represents a sort of emotional hangover. It can, however, represent a definite handicap to the exercise of good judgment on the part of the administrator. Administration by contrition can inhibit the use of his best judgment the same as administration by retribution. If the administrator says yes when he should say no, in order to make amends for an anger spree, he is compromising his responsibility. If he feels obligated to another member of the organization he will hesitate to exercise critical judgment so far as that individual is concerned. It is a case of paying penitence for his personal acts at the expense of the enterprise.

Anger is only one of the effects on judgment of a low stress level. There are other extremes which can be equally damaging. Fear can be more blinding in its effect on judgment than anger. It is seldom manifested in such extravagant forms in administration as is anger but it plagues every administrator in some degree. In its milder and controlled forms it can be considered an asset to the administrator because it serves as a censor on his judgment and on his actions. It is a reminder to the administrator that he is not a free-wheeling agent and that there are consequences which he must face. The normal person learns to live with his fears—to both observe and control them. Experience teaches him what fears to respect and what risks to take. Because of his greater exposure to pressures

and risks it is necessary that the administrator learn to exercise a high level of self-control so that he will not panic in the face of opposition or uncertainty. If he allows his fear to become fright his reason and his scruples can be obviated. Fright can confuse his judgment and also prevent him from exercising what he knows to be his best judgment.

The urge to act from expediency results largely from a form of fear. It may result also from other factors such as a lack of administrative time or energy but it most commonly represents the administrator's concession to pressures that he is unwilling to face. Expediency is an attempt by the administrator to buy his way out of problems by yielding to immediate pressures and ignoring the long-run effects of the decision. It often results in the administrator's "painting himself into a corner" in terms of policy and being stuck with a policy that he can't live with.

Expediency weakens user

If the administrator repeatedly yields to expediency it cannot help but permanently weaken his influence in the organization. Yielding to the pressures of the moment is the same as issuing an open invitation for an attack on his authority by the most aggressive and most vocal members of the organization. The result is a sort of "cafeteria administration" in which everyone strong enough picks out his own policies.

A policy of peace at any price has seldom produced peace but it can be counted on always to raise the price.

In this connection it should be pointed out that administration is not a popularity contest and that many administrative decisions of necessity represent choices between opposing views within the organization. While all members of an organization may have the same long-term interests, their ideas as to how to best achieve those interests are not always so clear and unified. Under such circumstances it isn't possible for all sides to like all administrative decisions, but it is possible and important that they respect them. Such respect is possible only if the decisions follow some logical pattern obvious to all parties affected by each decision.

(To be concluded)

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Copyflex gives you sharp, black-on-white copies (color-coded if desired) for as little as a penny each for materials for letter-size. A small Copyflex machine costs no more than a standard typewriter. You have everything to gain by mailing the coupon.

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MODERATE SIZE HONEYWELL 400 SHOWN; NCR READIES EDP CENTERS

Datamatic's new 400 system makes high-speed electronic data processing available to "6,000 of the country's top 10,000 companies."

A high-speed, moderately priced electronic data processing system suitable for small to medium-size applications has just been introduced by the Datamatic Division of Minneapolis-Honeywell Regulator Co. The new system, known as the Honeywell 400, is a full-scale, magnetic tape data processor, which has been deliberately designed to be a contemporary of the larger Honeywell 800 system, introduced a little more than a year ago.

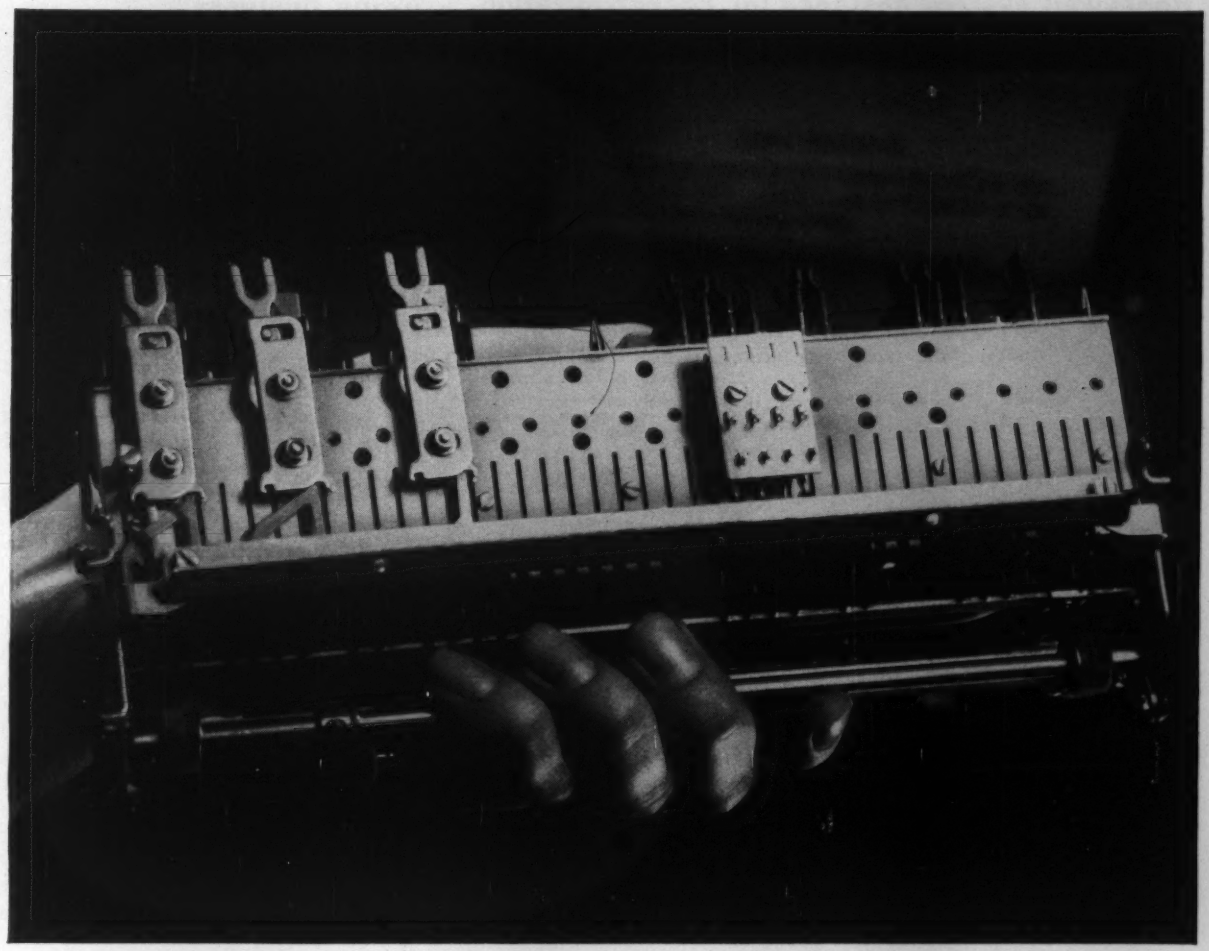
Described by Walter W. Finke, Datamatic president, as "the most powerful data processing system available in its price class," the all-transistorized Honeywell 400, which includes a central processor, four magnetic tape units and a high-speed printer, will rent for less than $10,000 per month. "Because of its modest price," reports Finke, "we estimate that the Honeywell 400 will make the benefits of high-speed electronic data processing available to more than 6,000 of the top 10,000 companies in the United States."

Correspondence between the new 400 and the Honeywell 800, though the former is a less sophisticated mechanism, is obtained by having both systems use a common language for programs and data alike, and by having them use the same magnetic tape units, high-speed printer, punched card readers and punches.

The central processor, capable of functioning at 6,000 additions or subtractions per second, contains a memory of 1,024 words, which may, at customer option, be doubled to 2,048 words. Operating with 48-bit words, the processor can thus provide storage for 10,000 characters or, in its expanded version, 20,000 characters.

Like the Honeywell 800, the 400 is programmed with 3-address instructions. It has internal parity checking, and other features, as

Transistorized Honeywell 400 can make 6,000 calculations a second and store 10,000 characters of information.



Stunt Box—your Big Plus with Teletype printers

Built into Teletype Model 28 page printers is a control device called the Stunt Box. The function of this unique component is to provide extra control facilities for both local and remote operations. Thus—in addition to transmitting, receiving and recording messages and data—the page printer can be used for a variety of switching, remote control and selective calling tasks.

The Stunt Box reduces costs by simplifying equipment needs and systems arrangements. It is the Big Plus—the extra value in Teletype Model 28 page printers and automatic send-receive sets.

Teletype Corporation manufactures this equipment for the Bell System and others who require the finest in data communications equipment.

Write for free 20-page brochure, "The Teletype 28 Stunt Box," to Teletype Corporation, Dept. 35 E, 4100 Fullerton Avenue, Chicago 39, Ill.

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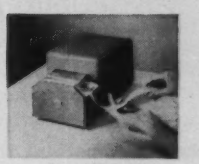

Tape Reader

Send-Receive Page Printer

Automatic Send-Receive Set

TELETYPE®
CORPORATION
SUBSIDIARY OF *Western Electric Company* INC.

Use Readers' Inquiry Coupon on Page 112

listed by Minneapolis-Honeywell's Datamatic Division, are: simultaneous reading from one magnetic tape and writing on another, special automatic editing provisions, and high-speed sorting ability.

With its transfer rate of 96,000 decimal digits per second, the Honeywell 400 magnetic tape unit is also identical in operation to the larger 800 tape mechanism. That is, instead of moving the tape by means of a mechanical roller to pinch the tape against a spinning capstan, the three-quarter-inch tape is moved by applying air pressure. Likewise, the absence of air pressure, a vacuum, is utilized to stop the tape instead of releasing the roller pressure and applying brake blocks. Honeywell claims that this method eliminates the problems caused by a great many moving parts and their attendant problems of wear. Errors occurring either during the recording process or during playback from tape are automatically detected and corrected by "Orthotronic Control."

The same 900-lines per minute printer as the one supplied with the Honeywell 800 is employed by the smaller 400 system. Its output consists of lines of print 160 character positions long. Up to 120 positions may be active at one time to be printed on any one line. The alphabet consists of 56 characters. Line feed is under program control and normal spacing is six lines per inch. Lines may be skipped at the rate of 126 lines per second, and a maximum of five carbon copies can be obtained.

Operating at 650 cards per minute, the Honeywell 400 card reader is a machine already familiar to those in the data processing industry. In fact, all of the Honeywell punched card equipment in the 400 system is the same that is used in the data processing systems of other manufacturers. The card punch is provided in two versions operating at 100 cards per minute and 250 cards per minute. Either of these punches can be specified by the customer.

Honeywell makes it plain that its 400 system has been designed for the user who has the procedures and processing needs of a large company, but with smaller volume. The company classifies this type of user into three categories: the small, but growing business; the division of the large, decentralized corporation; and the company whose processing load has seasonal or other peak load activity.

For the small, but growing company, Honeywell declares that the compatibility of the 400 and 800 systems makes it possible for this type of firm to begin initial operations with the smaller 400 processor. Later on, when the firm has expanded sufficiently, no reprogramming or file conversion is necessary to convert to the 800 system.

The division of the large corporation, desiring to conduct its own processing activities at its own plant and yet provide data to a central

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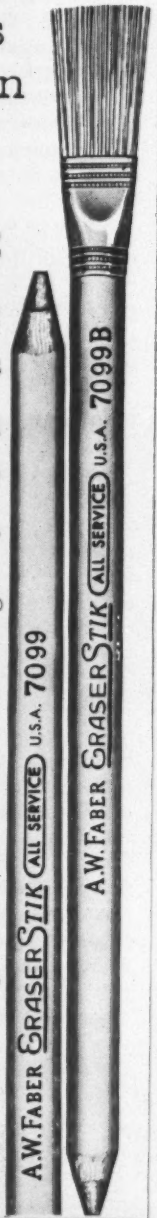

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works like magic. Gives you the correct point on your EraserStik—then stops sharpening. If you use one, you need the other. Ask your Stationer.

Shaped like a pencil, it sharpens like a pencil to any style point you prefer—blunt, medium or slender.

A.W.Faber-Castell
Pencil Co., Inc., Newark 3, N. J.

AUTOMATION IN THE OFFICE

location for corporate-wide processing with the Honeywell 800, will find its requirement filled by the 400 system, according to Honeywell officials.

And the firm which finds it must handle short seasonal periods of high activity, notes the company, can retain the Honeywell 400 for use during low-volume periods, adding additional systems at times of peak activity, or converting to the full-size 800 system. Actually, as the manufacturer points out, any combination of 400 and 800 systems can be pressed into service without setting up separate files or reprogramming because of the compatibility of the two units

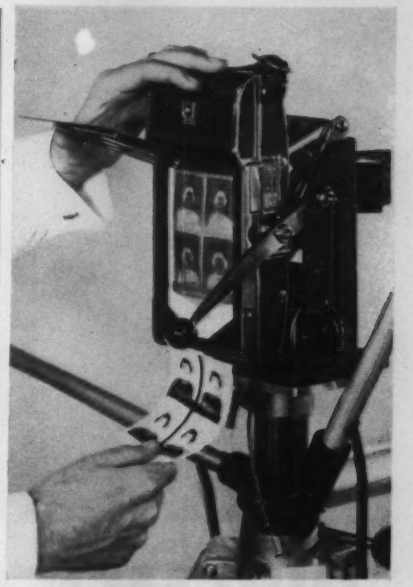
Three NCR centers announced

The National Cash Register Company recently announced that it would establish three data-processing centers throughout the country this year. The centers, to be located in New York, Los Angeles, and the company's headquarters in Dayton, Ohio, will be the first in a proposed nation-wide network, the company reported. The New York center will occupy the ground floor of the new Getty Building, Madison Ave., at 61st St.

Each processing center will function, primarily, around the abilities of the new NCR 304 data processing system, the company said. The facilities are expected to maintain a 24-hour, seven-days-a-week operating schedule.

Services to the banking industry will also be provided, spokesmen reported, with high-speed electronic check sorters and other banking automation equipment.

The NCR centers will process information entered on paper tape or punched cards which can be mailed or carried to the processing center. "In principle," Stanley C. Allyn, NCR board chairman said, "the plan is not unlike that followed in photography. Millions of people own cameras but relatively few develop and print their own films. Instead, they send the film to a processing center and get back the prints. Substitute punched tapes or punched cards for 'film' and com-



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INDUSTRIAL PRODUCTS DIVISION
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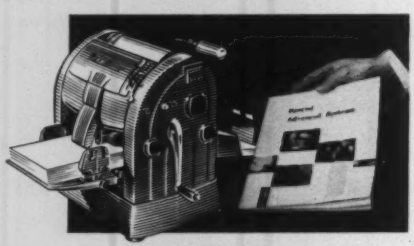
"OUR MEN CRIED FOR SALES FOLDERS (...but we couldn't afford them")

Do the higher costs of printing keep you from turning out **needed** catalogs, folders, mailers? Then you'll welcome the Rex-Rotary D-280. It produces **real** printing—in your office—at a fraction of the cost of outside printing. No special training is required.

The Rex-Rotary D-280 prints from typewritten or typeset copy. It prints everything—drawings, charts, **even photographs!** In black, in color, in two or more colors. A unique ink control assures uniform printing.

Anyone can operate the Rex-Rotary D-280. All the skills are built into the machine. It prints thousands of copies, automatically. Stops automatically, too! It gives perfect registration on multi-color jobs. It even prints from letter-size stencils without masking (another Rex-Rotary exclusive). And your secretary will welcome the sealed ink cartridges, which eliminate messy fingertips.



the OFFICE printing press

Nicest thing about this ultra-modern, silk-screen mimeograph is that **only you** know of its economy. Customers, dealers, salesmen, see clean, clear printing. Let us show you how companies—large and small—get more printing, at less cost, with a modern Rex-Rotary. The coupon below will bring all the information. Fill it out—mail it now.

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Please ☐ send literature ☐ call to arrange a demonstration

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pleted reports for 'prints' and you have an almost exact parallel."

The service center will serve the needs of the retailer as well as those of large industrial firms and service organizations, Mr. Allyn said. "Reports supplied by the centers will enable retailers to evaluate sales trends more rapidly and gear their merchandising plans more closely to the needs of the customer," he added.

The new program of service centers, according to Mr. Allyn, "will enable NCR to provide complete record-keeping automation – from the original entry to the final management report."

Print unit operates from tape

The Remington Rand Univac Division of Sperry Rand Corporation has announced a high-speed printing unit that is compatible with the Univac line of tape-fed computer systems as well as those of other manufacture. The printer has hitherto been applicable only to the company's line of Univac computers, the company said.

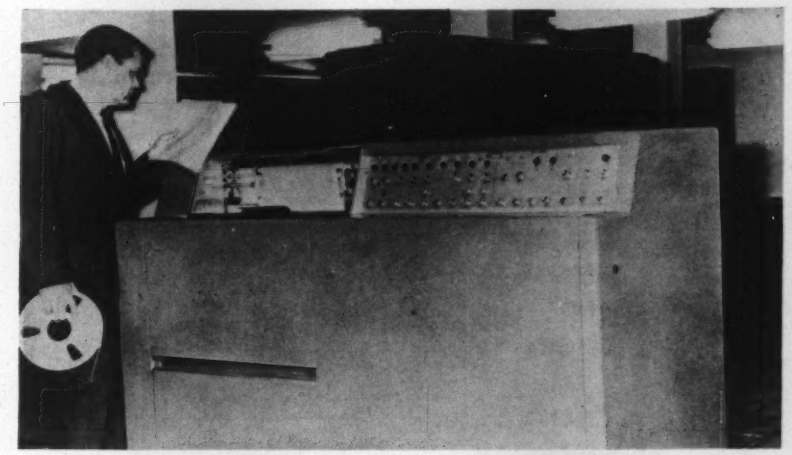
The complement of equipment includes a tape reader, a control unit, and a printer, all of which are called the Univac Compatible high-speed printer. It operates at 600 lines per minute on the "off-line" principle which does not require the computer to be tied up while printing. The printer will rent for $3,500 a month, according to a company spokesman, or it may be purchased at $195,000. Deliveries of the new machine will begin in about eight months, the company said.

EDP "missing link" developed

A device which collects various production data at the point of origin has been announced by William C. Norris, president of Control Data Corporation, Minneapolis, Minn. The Model 180 Data Collector, described as the "missing link" in data processing, is a modular self-contained unit that may be mounted either on a wall or table. Since there are no communication lines from the unit it may be moved around the facility when desired, company spokesmen said.

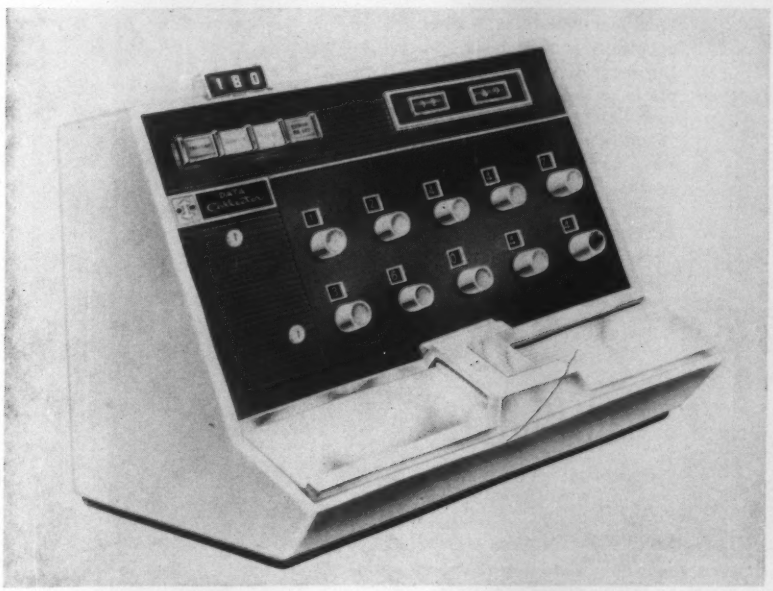
The 180 Data Collector contains

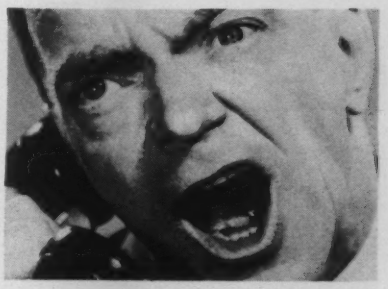
its own output paper tape recorder which assembles variable data, identification data from pre-punched IBM cards (such as employee number and item number), and fixed data. The unit also contains an internal clock which records the time of transaction to the nearest 0.01 hour. Variable data, such as the number of items produced, are inserted in the machine by one or a combination of ten manually operated dials. Identification data are read from IBM cards through the unit's card reader which employs a pneumatic principle found to be most suited to a rugged factory environment. Spokesmen for the company reported that cards of various lengths, whether they are bent or wrinkled, may be used in the Data Collector. Punched tape containing the recorded information may be processed on Control Data's Model 160 desk-size computer, or any other standard central computer, they said. Price of the 180 Data Collector was reported to be $2,995, with delivery scheduled for the summer.



Rem Rand printing unit operates "off-line," does not tie up computer.

180 Data Collector gathers production information at factory.





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Once you're producing economical office printing the easy, low-cost Rex way, you'll welcome the exciting possibilities of these other money-saving Rex products:

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ELECTRO-REX, a revolution in stencil making. Just insert type proofs, printed matter, clippings, drawings or pictures. While the drum rotates, every detail is faithfully transferred to a mimeo stencil or offset plate—electronically—at only pennies per stencil. No darkroom. No chemicals. No special training.

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New **FOTO-REX** lets you produce crisp headlines—on the spot—at irresistibly low cost. Hundreds of type faces and sizes available. Special fonts, logos or screens made to order. Easy? Just insert a letter—expose—dial the spacing. **Only $139.50**

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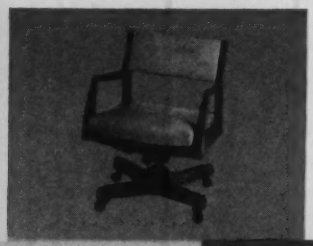
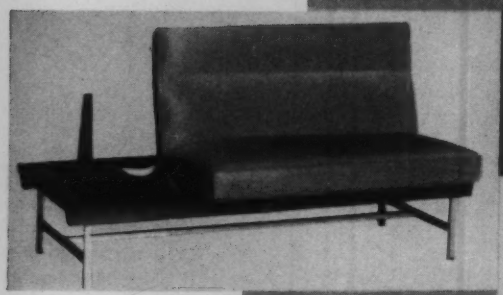
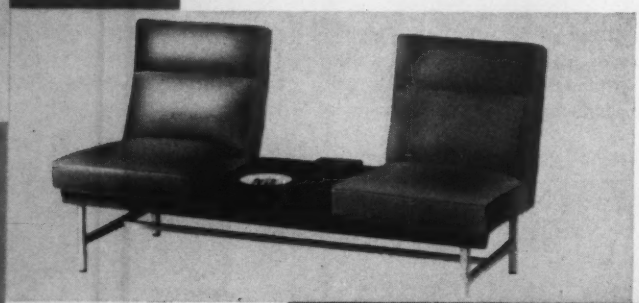
REX-ROTARY

Chairs shown from Monarch Furniture Company, High Point, N.C.







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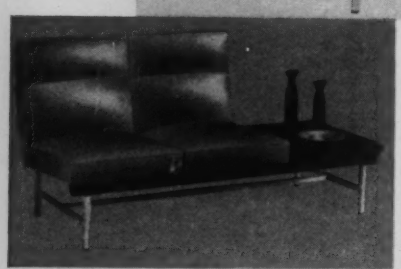
This year "Fabrilite"* vinyl upholstery accents color . . . the most striking, uplifting colors you've ever welcomed into your office. And with "Fabrilite" goes money-saving, easy care, extra-long wear. Marks and stains merely sponge away. Heavy traffic never shows. Ask for "Fabrilite" when you decorate—businessmen with an eye on beauty and budget do!



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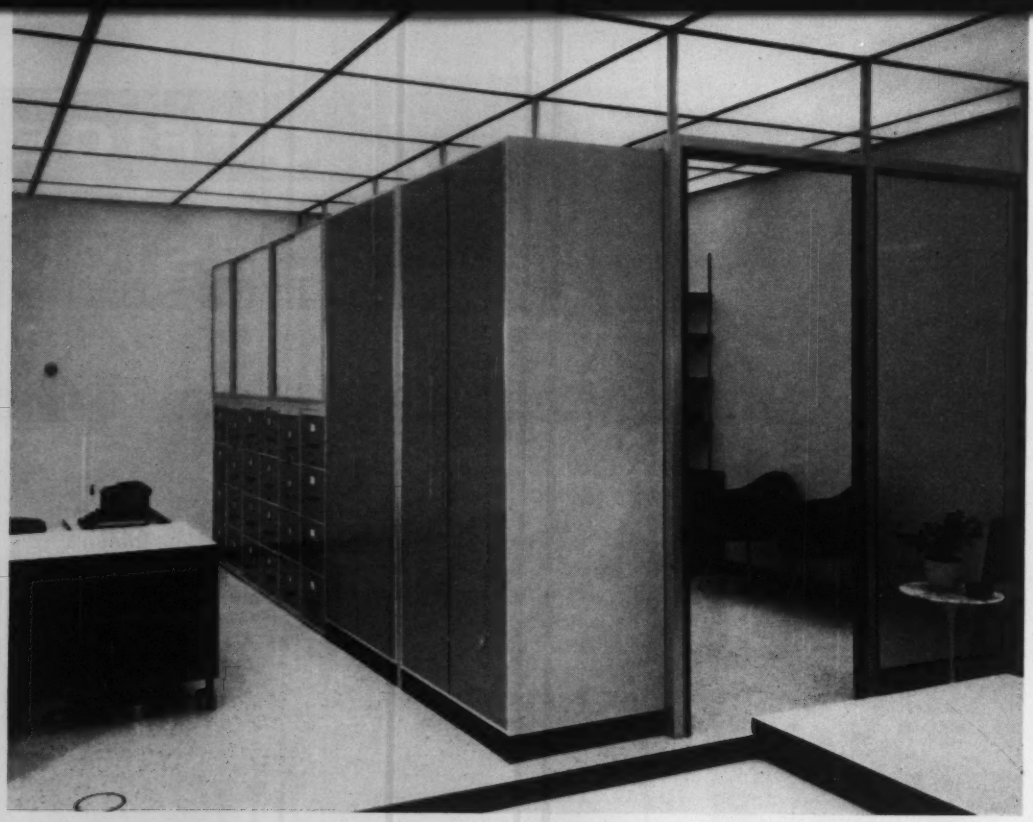
"AIRY" LOOK CHARACTERIZES NEW OFFICES

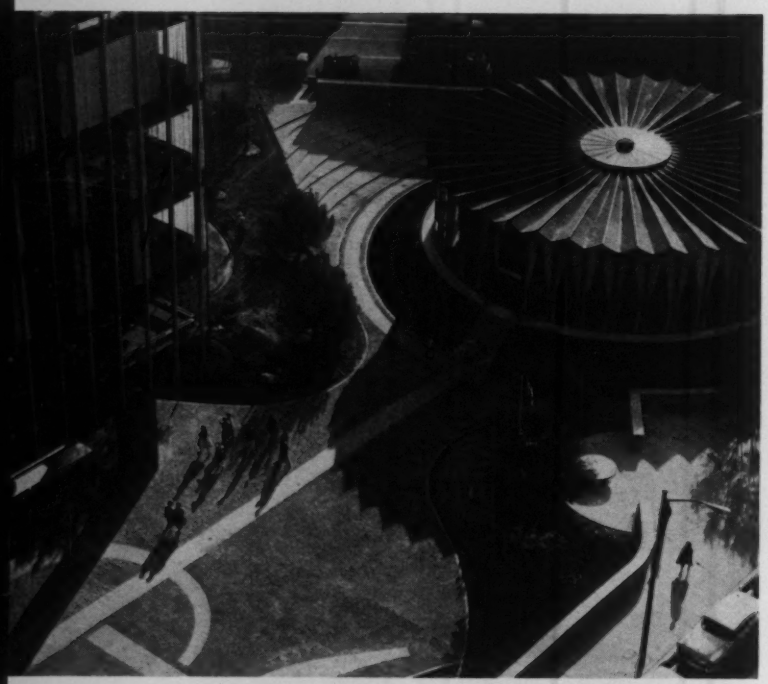
TIME WAS when offices, except for the private domains of corporate officials, utilized every inch of space, crowding the maximum number of workers into the smallest possible area. Office buildings, too, were designed to occupy every square foot of space that was available on their building sites.

Paradoxically, as the pressure for office space has increased since World War II, space allotments themselves have become more generous. The very fact that additional space was hard to find when it was needed led planners to stipulate a

"Office of the Year" Award winners illustrate trend. Southland Life offices typify "new look."



Glass doors and partitions at Berkshire Life add to attractiveness . . .



. . . while open mall at Crown-Zellerbach lets building "breathe."

generous "expansion factor" when planning new company quarters. Thus, the face of the office is changing. In spite of the pleas of many planners to keep expansion space clear, most concerns are tempted to make the most of it while they can. As a result, offices today boast a much more open, airy look than ever before.

The general effect of "more room for everybody" is added to by the de-emphasis on private offices at any except the highest company levels, and the trend toward giving private offices an "open look" by the use of clear glass partitions.

And, finally, office buildings themselves are ensuring "breathing space" through open courts and plazas to separate the structure from the street and surrounding buildings.

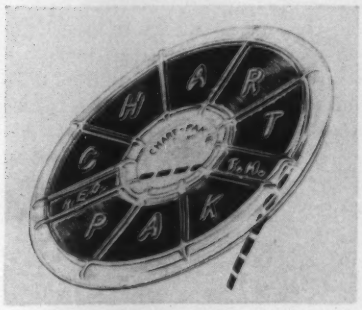
NEW SYSTEMS AND EQUIPMENT

▲ **Vending machine** 1

Automatic vending machine can display, behind glass, 130 separate food and drink items. The machine will handle any combination of coins between five and 50 cents. Rowe Mfg., Co., 31 E. 17th St., New York 3.

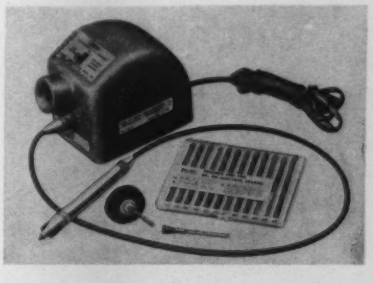
◗ **Mechanized eraser** 2

The Presto #80 Electric Typewriter Eraser employs high speed rotation of 1/8-inch diameter eraser mounted on flexible shaft. Erasers are 3½ inches long; and are available in three grades. Metal Specialties Mfg. Co., 1975 North Cornell Ave., Melrose Park, Ill.



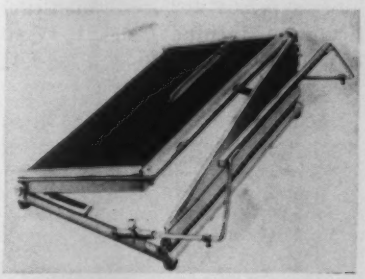
▲ **Tape container** 3

Dispenser package, called the "Tape-Saver," is now available for entire line of pressure-sensitive tapes ranging in width from 1/64-inch to 2 inches. Chart-Pak, Inc., Leeds, Mass.



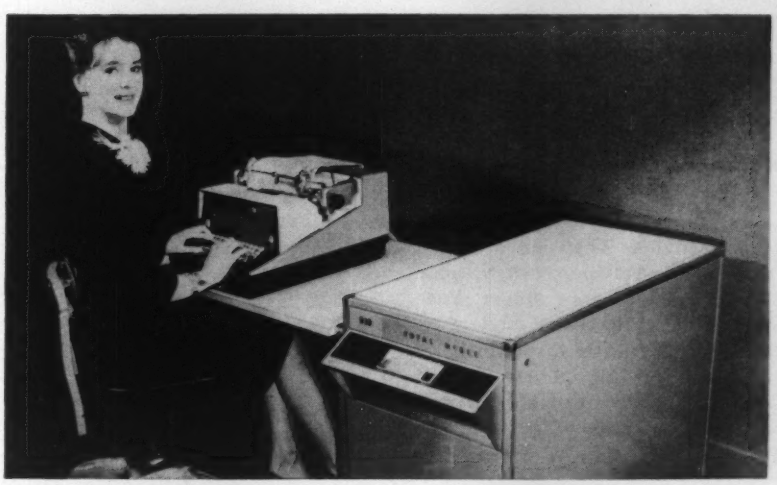
▼ **Paper cutter** 4

The "Lightning" Desk Trimmer is designed to eliminate scissors and razor blades in the preparation of photos, negatives, stats, and other art materials. Exposed parts of the trimmers are nickel-plated; base and table frame is welded tubular steel with angle bars to prevent warping. Available in three sizes: 14⅜, 18, and 26 inches. Prices start at $34.95. Michael Lith Sales Corp., 145 W. 45th St., New York 36.



◖ **Computer-typewriter** 5

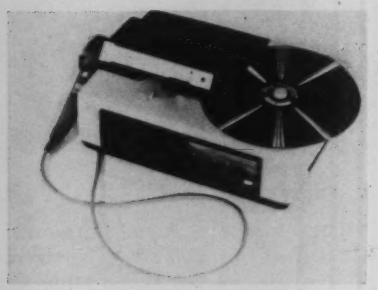
Billing operations are automated with this new sequence-controlled computer typewriter. Called the Royal McBee 9:0 computer, the machine types all extensions, subtotals, and totals automatically. A stored program can be activated at the touch of a button to automatically print description of taxes, discounts and rates, and associated calculations. An easily replaced plugboard permits a change of job instructions in a matter of minutes. Royal McBee Corp., Port Chester, N. Y.



NEW SYSTEMS AND EQUIPMENT

◀ Charting materials 9

Charts and graphs can be simply made by inexperienced personnel with the CharTray System. The CharTray is manufactured of lightweight aluminum; kit includes clear acetate grid, eight colored backdrop sheets, colored pressure sensitive letters and numbers. Overall dimensions are 22 by 28 inches. Price, $75. CharTray Systems, Stony Brook, N. Y.

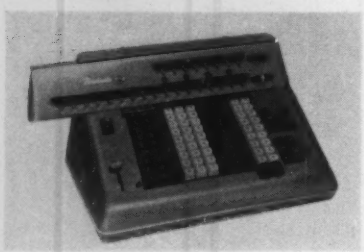


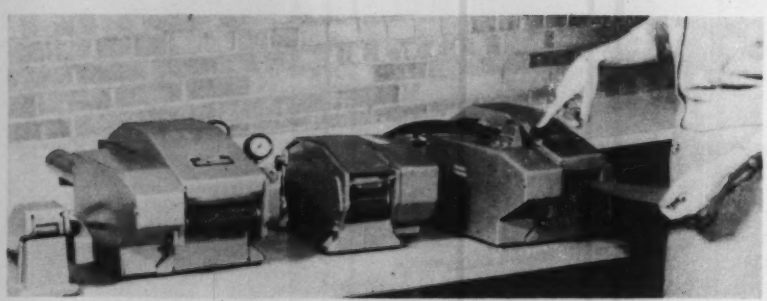
▲ Dictating machine 6

Model TN-5 Rex Recorder dictating machine features a roll tape "tear-off" indexing system that allows changes and insertions on letters to be found with optimum efficiency and speed. The new machine is priced at $295. American Dictating Machine Co., 51 West 45th St., New York 36.

▼ Calculator 8

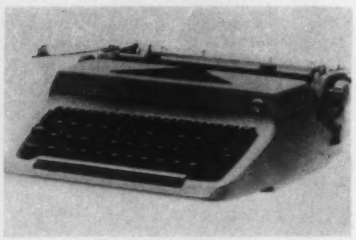
VA 17 fully automatic calculator by BADENTA of West Germany combines versatility with simplicity of operation. Machine has automatic transfer mechanism which allows operator to work out a problem containing a "mixed" series of functions without resetting. Distributed by Continental Office Machines, Inc., 500 Fifth Ave., New York.





▲ Tape dispensers 7

Four basic models are in a line of air-operated tape dispensers for large-volume taping operations. Called "Scotch" brand air-operated definite-length dispensers, the machines automatically dispense pressure-sensitive tape into pre-determined lengths. They are activated by push of a valve, or switch; some are triggered by foot, finger, knee or arm pressure. Some models respond automatically to products on the assembly line. There are 14 different models available. Minnesota Mining and Mfg. Co., 900 Bush Ave., St. Paul 6, Minn.



▲ Portable typewriter 10

New Facit portable typewriter features a double tabulating system and a specially engineered carriage bearing system said to permit carriage movement as smooth as that of a standard machine. Facit, Inc., 404 Fourth Ave., New York 16.

▼ Noise reducer 11

The model TW-M Acoustinet, designed to reduce the noise of typewriters, weighs five and a half pounds. Interior of the Acoustinet is lined with urethane foam insulation. Plexiglass vision shield, which is aid to reduce typewriter noise by at least 50 per cent, allows easy access to the platen. Available in color combinations. Gates Acoustinet, Inc., 2690 Sheridan Dr., Tonawanda, N. Y.

Eliminate annoying glare and heat problems with new SUN-X Glass Tinting!

How can *anyone* run an office machine efficiently with the bright sun glaring in his eyes? Or do any kind of paperwork with the sun's glare bouncing off the desk top? It's easy to see why office efficiency goes up when sun glare is eliminated by Sun-X Glass Tinting!

Sun-X controls heat, too — keeps employees near windows from complaining about the heat while other employees think the air conditioning is too strong.

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This remarkable new product by Du Pont is applied quickly and neatly to your windows without disturbing your normal office routine. It bonds tightly and is guaranteed in writing not to chip, crack or peel. No special cleaning is needed — Sun-X tinted windows are washed just like any other windows.

Available in 14 distinctive colors, Sun-X Glass Tinting gives you the convenience and distortion-free appearance of factory-tinted glass at a fraction of the cost. Send for the free folder — see how Sun-X can increase efficiency in *your* office!

Control heat, fade and glare with modern, low-cost Sun-X Glass Tinting.

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Name_____

Firm_____

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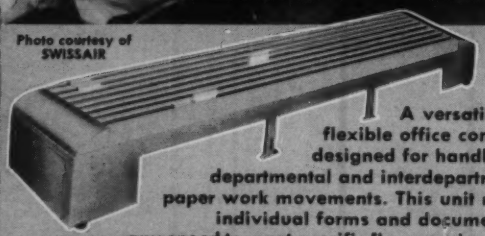
City_____ Zone____ State_____

The MERCURY "OFFICE" CONVEYOR

Photo courtesy of SWISSAIR



A versatile and flexible office conveyor designed for handling of departmental and interdepartmental paper work movements. This unit moves individual forms and documents at any speed to meet specific flow requirements.

Executives engaged in time study, methods, systems or procedures are invited to write for Bulletin No. 500.

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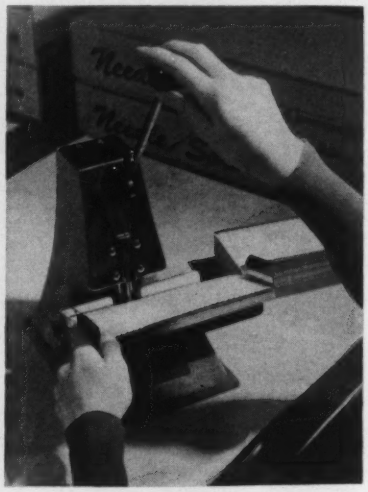

▲ Card punching device **12**

The Needle/Sort Desk Model Groover is a device for notching up to 75 Needle/Sort punched cards simultaneously; other marginally punched cards or checks can also be notched by the machine. The groover weighs 14 pounds and is mounted on a non-skid rubber base. Available on rental basis. Price, $125. Beekley Corp., Data Systems Div., West Hartford, Conn.

▲ Portable typewriter **13**

The Primus, a new model of the Adler portable typewriter, features a keyset tabulator, pop-up paper rest, end of the line indicator, and special hole on line for ruling perfect lines while typing. It is available in both Pica and Elite type styles. Addo-x Inc., 300 Park Ave., New York 22.

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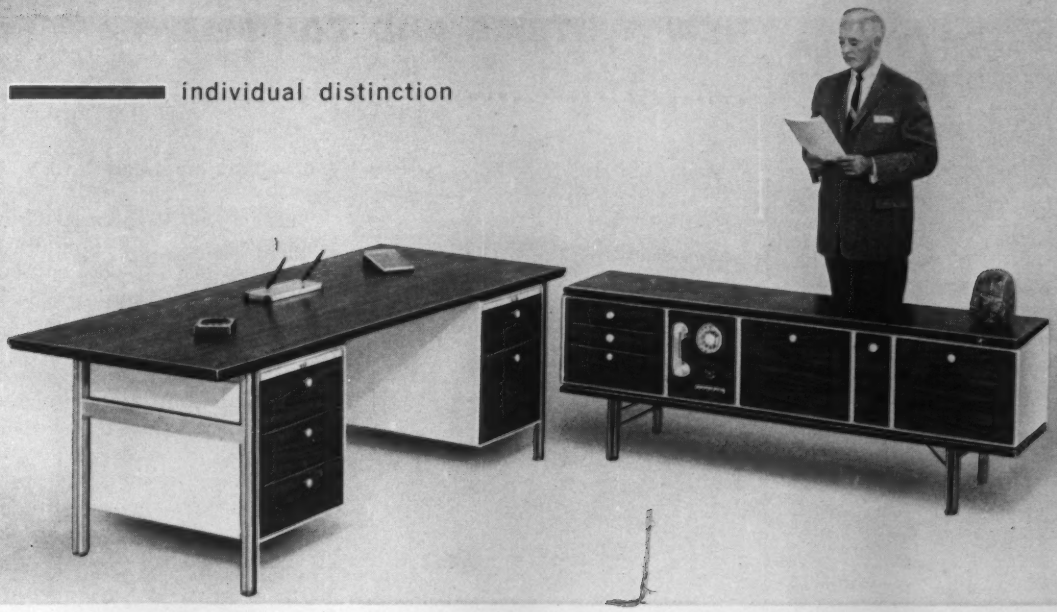

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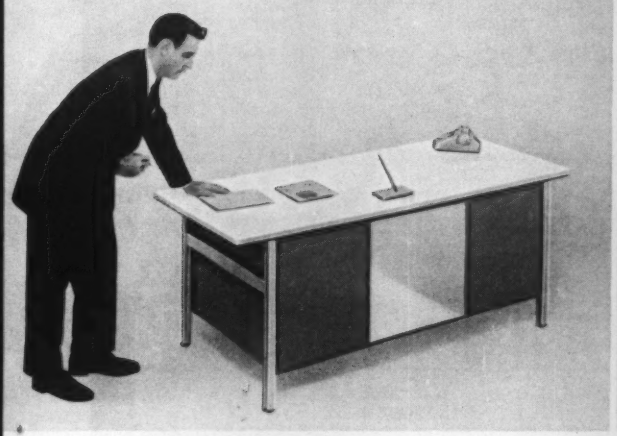

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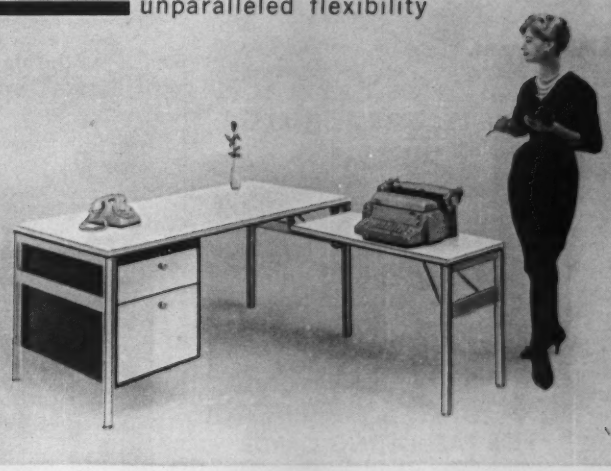

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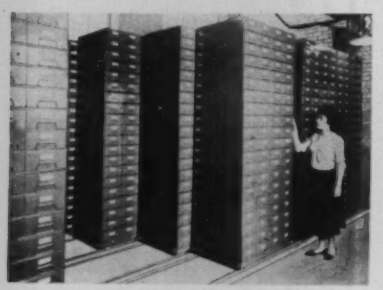

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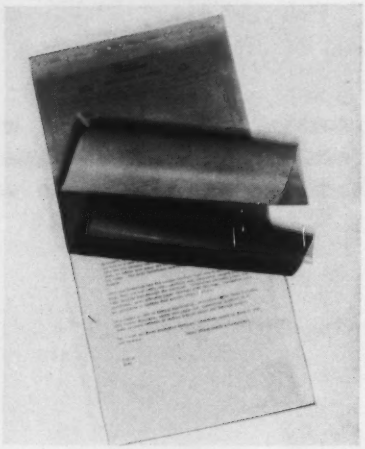
NEW SYSTEMS AND EQUIPMENT

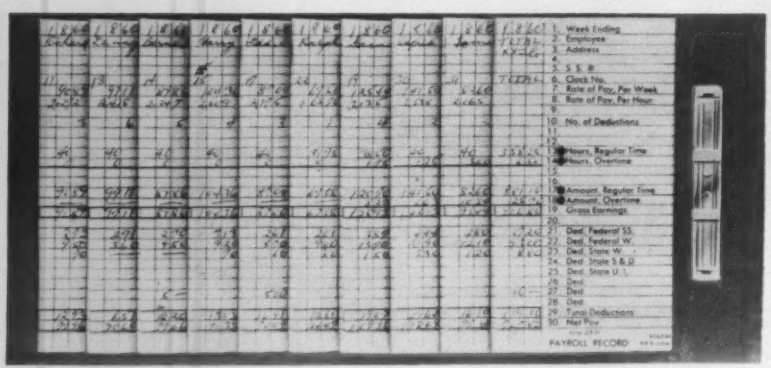
▶ Stencil sheet **14**

Duplicating stencil, called the "executive," is specially coated to insure sharp copy regardless of size or style of type, according to the company. The stencil may be used immediately from the box, and contains an extra strength that is said to prevent tearing and copy distortion during long runs. The Gestetner Corp., 216 Lake Ave., Yonkers, New York.

◀ Computer input unit **16**

The Duplex Tape Input Unit is a "piggy-back" paper tape unit for the Burroughs E101 electronic computer. Here it is shown atop the standard model A 531 Paper Tape Input Unit. The device increases the versatility of the desk-size computer by permitting it to accept data and instructions from either of two tapes. Burroughs Corporation, ElectroData Division, 460 Sierra Madre Villa, Pasadena, Calif.





▲ Payroll system **15**

The "Foldaligned" Payroll Record Form is a 3-part carbon interleaved set consisting of a short top white sheet for the employee, a long yellow sheet for "individual earnings," and a long pink sheet for recording the total payroll record. All three are filled in simultaneously with one writing, providing a payroll system of efficiency. Foldaligned Forms Co., 419 Broome St., New York 13.

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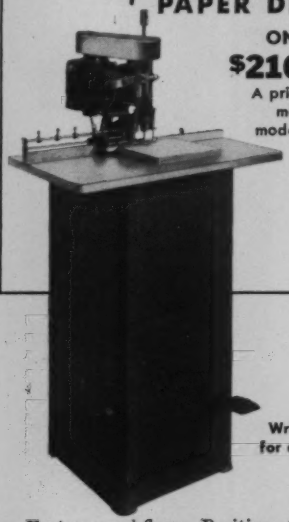

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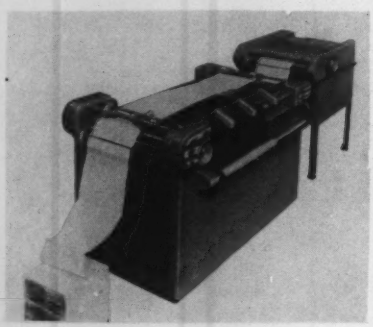
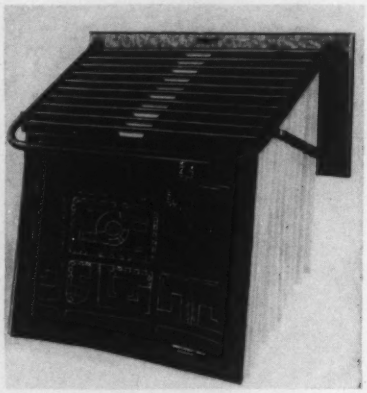
NEW SYSTEMS AND EQUIPMENT

▼ Deleaving machine 17

The Uarco 742 All Purpose Deleaver permits power deleaving of continuous tabulating forms which must remain fastened at one side for mailing, later delivery, or further handling. The device removes up to seven carbons in a single pass from an open side. Uarco, Inc., 300 West Congress Parkway, Chicago 17.





▲ Blue print file 18

The Martin Sheet File System, a wall-type file for blue prints, drawings, etc., features rubber-tipped lock-clips for mounting sheets in the clamp hangers. Each hanger will hold a number of prints and may be easily removed. Models are available to hold 30- and 42-inch wide prints. Lewbill Industries, Inc., 78 Spring St., Scottdale, Pa.

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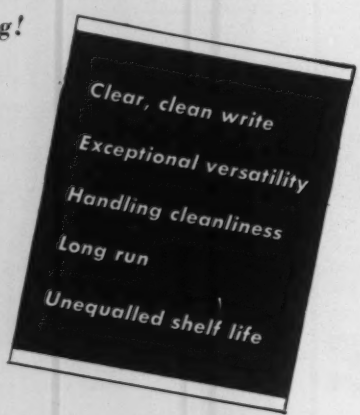

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▲ Data processing ribbon 19

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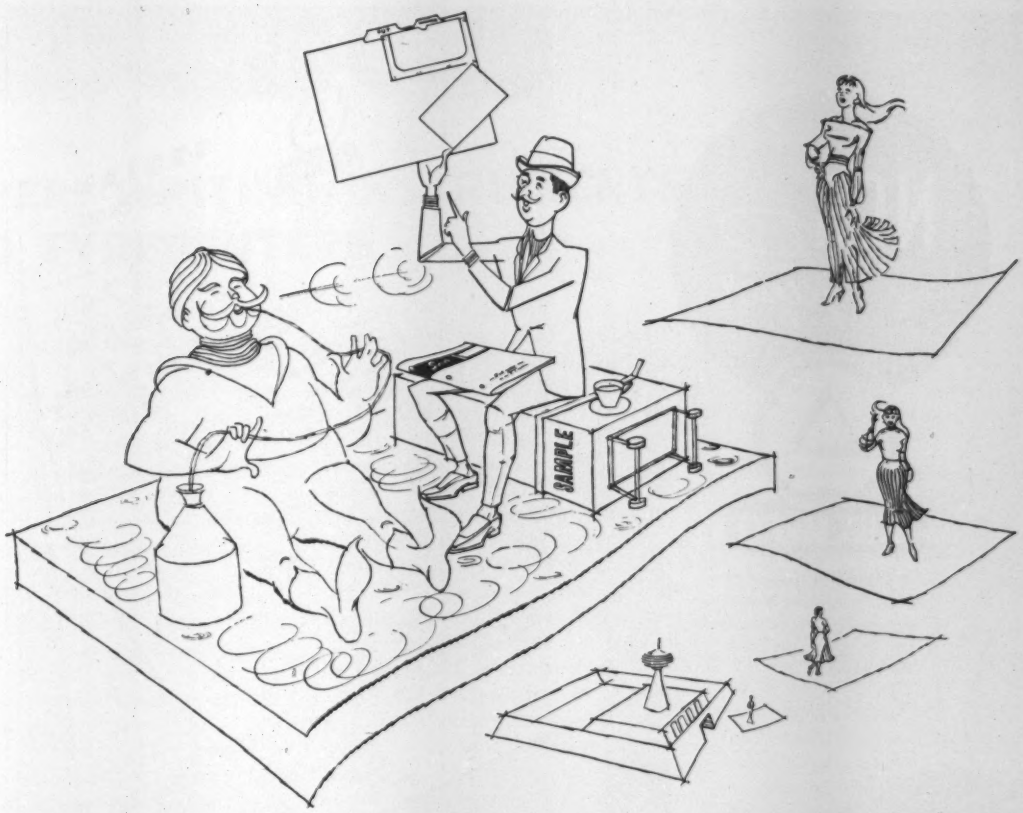

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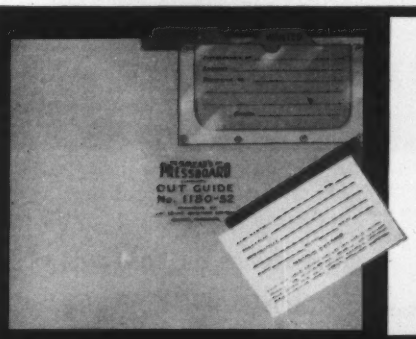

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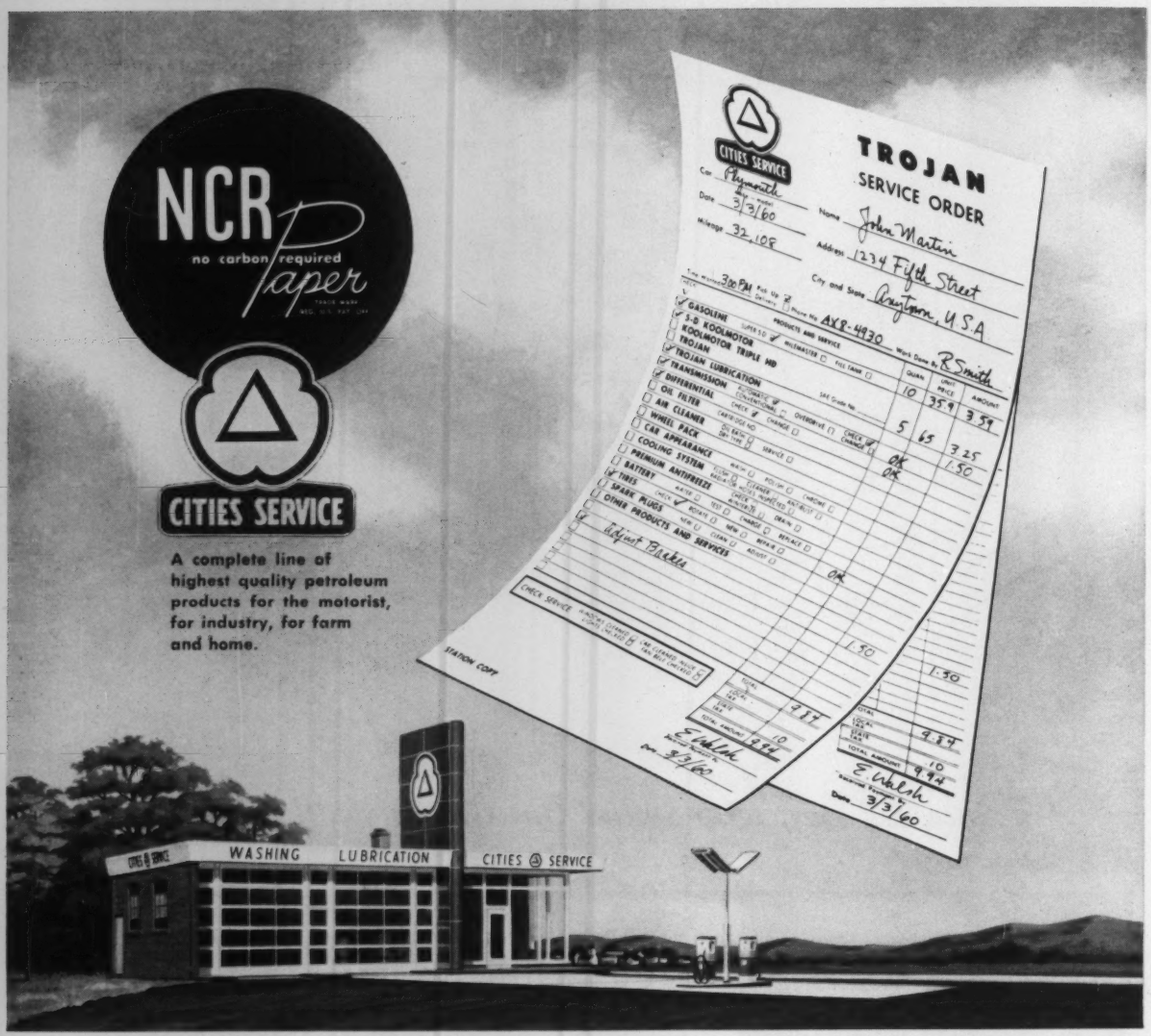

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TOOLS OF THE OFFICE

PAPER, WRITING INSTRUMENTS, AND TYPEWRITERS

By MARY D. LYONS

PAPER, writing instruments, and typewriters are all implements or "tools" involved in the writing or recording of information. To elaborate upon the importance of writing *per se* would be superfluous indeed, since the entire course of civilization has thus far been dependent upon the transmission of ideas from one era to another. The accumulation of experience and knowledge through the written word is what distinguishes our present society and culture from the somewhat apish existence of our cave-dwelling ancestors.

The invention of true paper is usually attributed to a lowly but clever Chinese servant named Ts'ai Lun.

Paper, like so many other things today, is an effective status symbol in the business world. The company image is a major factor in the selection of quality papers for correspondence and other presentations which are to be viewed by the fastidious, prestige-indoctrinated public eye.

There is always, of course, the exceptional firm president who is so confident of his stature that he finds it unnecessary to bother with the correct bond paper for his correspondence, and simply scribbles his messages, indifferently, in a hasty, semi-legible, yet effective scrawl, using the lowliest sheets of scratch pad. However, this sort of corporate confidence is fairly rare. The less arrogant, "everyday" office executive has found that it pays to be polite—for it is considered a matter of courtesy, as well as prestige, to send out letters on high quality paper.

It is not only for the sake of correspondence that strict attention should be paid to paper characteristics; the retention of basic office records demands that one type of paper be chosen over another according to the kind of record and the required degree of permanence.

The Council on Library Resources, Inc. recently produced some rather startling news pertaining to paper deterioration, not in office records but in books. The Virginia State Library, while investigating the physical condition of paper used in twentieth-century non-fiction books, came up with the conclusion that the paper is going to pieces so rapidly it seems probable that most library books printed in the first half of the 20th Century will be in an unusable condition in the next century. This problem is, of course, basically no new librarian lament; however, these new findings stress the seriousness of the problem to fairly critical proportions. At the present time, there are regularly constituted programs of photocopying, restoration, and re-publication, but they all have their limitations. Special library editions on rag paper of high permanence have frequently been suggested, but the cost is prohibitive. The library's investigation was conducted with the idea in mind of developing a process which will check paper deterioration, and fortunately, there does now appear to be a method which shows considerable promise.

Although this illustration of paper deterioration pertains to library books, it emphasizes the fact that all office managers should take careful stock of the type of paper they purchase for their company's records.

Every business office naturally employs a variety of types of paper. Use is the determining factor in selecting paper quality. Strength, longevity, erasing qualities, and opaqueness are all characteristics which must be investigated in order to make a wise choice. The basic guiding factors to use in selecting a paper for a particular purpose may be briefly enumerated:

1. Life. How long should the record be kept?

2. Recording method. Will the record be handwritten, typed, duplicated, or printed?

3. Abuse. How much handling will it receive? How hard will it be treated?

4. Appearance. What factors of color, texture, crackle, and general feeling do you wish?

5. Reputation of the manufacturer and supplier. Skill, experience, and integrity of the manufacturer and supplier must be "mixed" with the ingredients to make a dependable paper choice.

One of the major Eastern paper manufacturing companies, which produces paper in a complete range of grades, has eight different grades of paper for normal typing work alone, ranging from 100 per cent rag content parchment paper for use in permanent records to a "sulphite" bond — a paper made from wood pulp and treated with a sulphite process.

Rag content affects quality

Generally speaking, there are three sources of paper—rags, wood pulp, or a combination of the two. Within each family of papers, there is a wide range. The quality of rag paper will vary with the quality of the rags used in its manufacture—rag paper can be made from fresh cloth scraps from a mill, and it may also be based on scraps of worn cloth from various sources. The quality will vary.

The amount of the rag content affects the quality of the paper as much as the time and care spent in its preparation. One hundred per cent rag is made wholly from rags, papers of lesser content from a combination of rags and wood. The proportion of rag content to wood is used to designate the paper—thus,

Memo pads by Paxton Paper Company are packed for convenience and cleanliness.

there are 75, 50, and 25 per cent "rag" papers.

Papers prepared from wood alone vary greatly in quality. A high quality wood-based paper prepared from the best type of wood and carefully manufactured can be extremely useful for general office purposes, and will even stand the test of time for a period necessary to meet the retention requirements of the average office. However, although some sulphite papers will stand up for at least 30 years in record cabinets, they are not ever as durable as the best quality rag paper. Moreover, durability in a file cabinet is not the only test of paper. Papers that are handled frequently are subject to a much greater degree of deterioration than stored papers, and therefore papers that will be used frequently and must also be used over a long period of time, will most profitably be selected from the better rag stocks.

Fundamentally, the process of making paper is a uniform one for all commercial types. The raw material—either wood chips, rags, or a combination—is first cooked with steam and acid to form pulp, the basic material of paper. This liquid pulp (and the quality of the water used in preparing the pulp is one of the most significant factors in the quality of the finished paper) is then formed into a web of liquid paper on an endless mesh belt. This "river of paper" is then pressed through rollers on an endless belt of woolen material to squeeze out moisture. The rollers are placed in such a way that both sides of the paper are pressed directly against rollers by the woolen carrier.

This is the origin of two common paper terms—the wire and felt side of the paper. The "wire side" of finished paper is the side which was in direct contact with the wire mesh; the "felt side," that which was not. The felt side of paper can be distinguished by an acute eye from the wire side because it will be smoother, and because it is the side on which the watermark can be read from left to right.

The most common papers used in business are bond, ledger, bristol, and onion skin; and duplicating, offset, mimeograph, and other special types of paper used in the copying and duplicating processes. Of these, bonds are the basic correspondence papers; ledgers are heavier weight papers especially made for accounting, forms, and general heavy usage; bristols are quite heavy papers or card stocks for use in machine accounting, card records, etc. Onion skin is a very light paper similar to bond, and used primarily for carbon impression typing, duplicates, or in work where lack of bulk is a major factor.

Needs determine quality

These major types, of course, are fairly common knowledge to the average office executive. What is not so well known, perhaps, is the factor of quality in paper, and why the quality factor is so important.

It is often mistakenly assumed that high quality paper is useful only for records that must be kept for a long, long time, or alternatively for letterheads or other external communication media, as a prestige factor. But the fact is that usage is a deteriorating factor for any paper just as time is. If a paper or record is to have a comparatively short life, but a very active one, with much handling, it will usually be advisable to get a quality product. A paper stock that would ordinarily be serviceable in a file record for a long period of time might be completely unsatisfactory if it were used in constant interoffice handling, falling apart long before its usefulness was completed.

Another common error is to equate the weight of paper with its durability. Quality is the best guide to endurance—a light paper of high quality will generally perform as well or even better under all conditions of heavy usage or length of time than a heavier paper of lower grade.

The difficulty for the inexperienced buyer, of course, is to determine exactly what is the best quality paper. This is a real difficulty, for although the higher the rag content, the better the paper quality should be, with paper made of 100 per cent rag content at the very top of the list, a great many other factors also enter into the manufacture of paper besides the basic ingredient. If any of these factors is skimped, or is handled inadequately, the result may be less satisfactory than a product with lesser rag content but more careful preparation. The quality of the water used in paper manufacture is extremely important, as are the various chemical and finishing treatments given the product.

The safest rule to follow is to deal with a quality manufacturer whose reputation is your guarantee, or, if your paper needs are met through a printer, to make sure first that your printer knows the demands that are to be made on the products he makes for you, and second, that the printer himself is reliable. The average office administrator cannot expect to become an expert on paper qualities — nor should it be necessary, as long as he knows the basic facts about paper, and recognizes the quality most suitable for various office jobs.

Establish retention schedule

Since one of the crucial points in deciding paper quality for a given job is the length of time during which the paper must be serviceable, the general rule to follow is to use the highest grade attainable for permanent records, or any record which, while not necessarily permanent in itself, must, nevertheless, last a long time, during which period it will see heavy usage. Records which are not necessarily permanent, and which will be in files for most of the retention period, can employ slightly lower quality papers. Inactive records which have a very brief life can safely be put on low grade papers.

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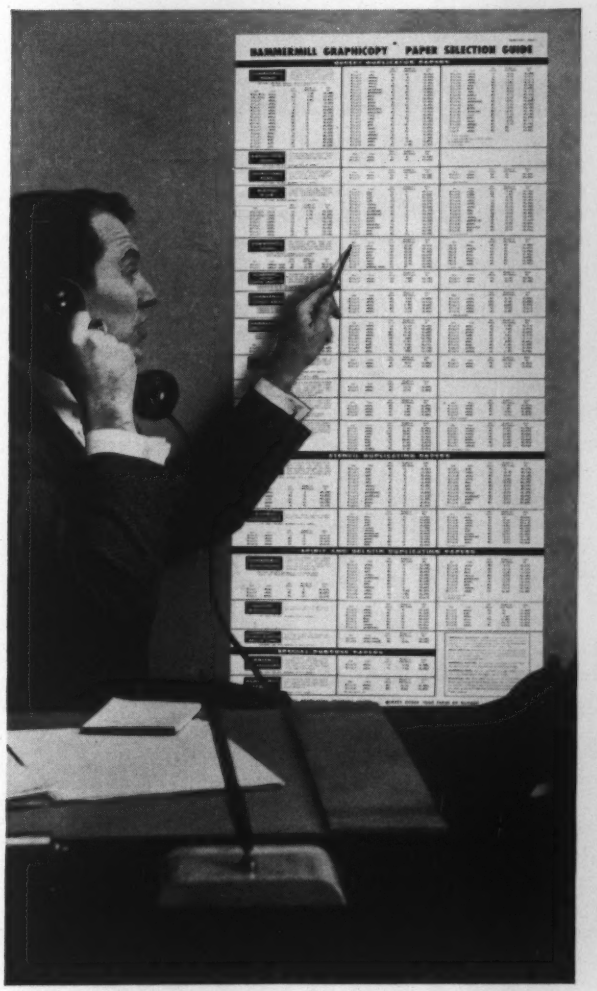

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TOOLS OF THE OFFICE

(*From page* 92)

This brings up the question: which records should be permanent, which should have a life period of a certain number of years, and which can be disposed of relatively quickly. These requirements will vary to suit the particular needs and requirements of every office, perhaps, but as good a guide as any is furnished by a "Manual of Record Storage Practice" published by the Bankers Box Company of Chicago. This manual lists for permanent retention: audit reports; balance sheets; case records; cash receipt records; check registers; corporations filed; documents; employee records; expense vouchers; invoices; posting copies; journal entries; job costs; ledger cards; ledger sheets; mortgages; payrolls; registration cards; vouchers; voucher registers.

The same source recommends for ten-year retention, cancelled checks and general correspondence; for seven-year retention, bill stubs, claims correspondence, and customers' orders.

Five-year retention is recommended for bills of lading; inquiry, quotation, and collection correspondence; credit reports; invoices; salesmen's reports; and card records.

Another area in which office administrators are sometimes confused by the specialized terminology of paper lies in terms of the "substance numbers" by which various papers used in the office are designated. (The bonds, ledgers, bristols, and onion skins are denoted by substance numbers; papers used in book and magazine printing are designated by "basic weight.") Actually, substance number refers to the weight of one ream of paper (a ream is 500 sheets) in the standard production size sheet of 17 by 22 inches. The most common bond substances are 13, 16, 20, and 24, while onion skin usually comes in substances 7 and 9. The higher the number, the heavier the paper, of course; ledgers have substance numbers running from 24 through 36; and bristols are available in substances 43, 53, 67, and 82.

To repeat, the standard size sheet for bond, ledger, and onion skin paper is 17 by 22 inches. It is from such sheets that the familiar 8½ by 11-inch letterhead sheets are cut. But the 17- by 22-inch dimensions are most important to the office administrator, not in their relation to letterhead size, which is standardized, but in relation to forms and papers of odd sizes which he may have made up for individual uses within the office. It is possible, if the standard sizes are kept in mind, to plan form dimensions to get the maximum use of paper without waste. Thus, for ledger paper, three standard-size sheets are available: 17 by 22, 17 by 28, and 19 by 24. Forms, for the most economical use of paper, should be planned in dimensions which make the least wasteful use of paper.

It is not necessary for any office person charged with general responsibilities to become a paper expert. What is advisable, for him and his firm, is that he learn some of the basic working facts about paper, its qualities and uses, what terminology is used to denote various types of paper, and what quantities and sizes are common in the industry. Equipped with this information, the office executive will be able to buy the proper paper for each of the various jobs in the office. And buying the right paper for each job is always an economy in the long run.

Trend to colored paper

Many paper manufacturers feel that there is a definite trend toward the use of more colored paper. Others state that there is a universal improvement in the quality of all general paper. There has also come about a better paper distribution at retail level, and increased customer acceptance of paper's improvements and innovations.

The erasability of different papers is another important factor in paper's properties. Unfortunately, due to lack of space, it would be impossible to do justice to this subject.

The special papers involved in the duplicating and copying processes, too, have seen a variety of changes and improvements. Not too long ago, for instance, it was necessary that mimeograph paper be exceptionally rough in order to absorb the ink rapidly, and thereby prevent smearing by successive copies. This is no longer necessary. Greatly improved papers of a wide variety of weights (and, of course, faster drying inks) now permit high speed mimeographing without slip-sheeting. A. B. Dick states that high grade bond papers can be printed and/or mimeographed, and that one can now mimeograph copies on fine, printed, letterhead stationery without fear of smearing the copies; moreover, mimeographing is now possible even on 28# and 36# Vellum stock, enabling one to duplicate heavier "cover-like" materials for his mimeographed copies.

The Manufacturers

American Pad & Paper Co., 88 Winter St., Holyoke, Mass.

American Writing Paper Corp., 9 Main St., Holyoke, Mass.

The Beckett Paper Co., 4th & Buckeye, Hamilton, Ohio.

L. L. Brown Co., Commercial St., Adams, Mass.

Brownville Paper Co., Brownville, New York.

Champion Paper & Fiber Co., Hamilton, Ohio.

Clinton Paper Co., 300 Bellefonte Ave., Lock Haven, Pa.

Crane & Co., Inc., Dalton, Mass.

Eastern Fine Paper and Pulp Div. Standard Packaging Corp., Bangor, Maine.

Eaton Paper Corp., 75 S. Church St., Pittsfield, Mass.

Esleeck Mfg. Co., Turners Falls, Mass.

Finch Pruyn & Co., Inc., Glens Falls, New York.

Fletcher Paper Co., 20 N. Wacker Drive, Chicago.

Fox River Paper Corp., 401 S. Appleton, Appleton, Wis.

Gilbert Paper Co., 330 Ahnaip, Menasha, Wis.

Groveton Papers Co., Groveton, N. H.

Hamilton Paper Co., Miquon, Pa.

Hammermill Paper Co., E. Lake Road, Erie, Pa.

Howard Paper Co., Aetna Paper Div., 115 E. Columbia Ave., Dayton, Ohio.

International Paper Co., 220 East 42nd, New York 17.

Kimberly-Clark Corp., Neenah, Wis.

The Letterex Corp., 1114 Half St., Washington, D. C.

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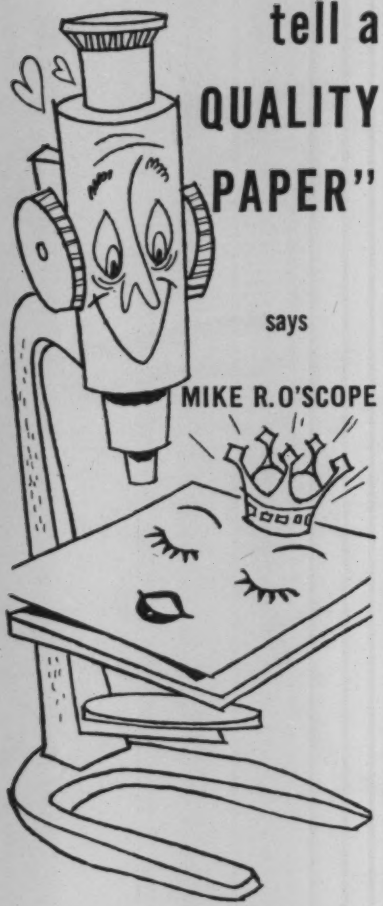

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Adams, Massachusetts

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Mead Papers, Inc., 118 West 1st St., Dayton, Ohio.
Mid-States Gummed Paper, Div. of Minnesota Mining & Mfg. Co., 6850 So. Harlem Ave., Bedford Park, Ill.
Millers Falls Paper Co., Millers Falls, Mass.
Mohawk Tablet Co., 1703 East End Ave., Chicago Heights, Ill.
Montag Brothers, Inc., 245 North Highland Ave. N.E., Atlanta, Ga.
Munising Paper Co., Div. of Kimberly-Clark Corp., Neenah, Wis.
Neenah Paper Co., Div. of Kimberly-Clark Co., Neenah, Wis.
Nekoosa-Edwards Paper Co., Port Edwards, Wis.
The Northwest Paper Co., Cloquet, Minn.
Olin-Mathieson Chemical Corp., Ecusta Paper Div., Pisgah Forest, N. C.
Oxford Paper Co., 230 Park Ave., New York 17.
Paxton Paper Co., 401 South Cameron St., Harrisburg, Pa.
Port Huron Sulphite & Paper Co., Port Huron, Mich.
Frederick Post Co., 3650 N. Avondale Ave., Chicago 18.
Rising Paper Co., Park St., Housatonic, Mass.
Riverside Paper Co., 800 S. Lowe St., Appleton, Wis.
Peter J. Schweitzer, Inc., P.O. Box 35, Elizabeth, N. J.
Select Paper & Tablet Corp., 1050 Atlantic Ave., Brooklyn, N. Y.
Shawano Paper Mills, 305 East Walnut, Green Bay, Wis.
Simpson Paper Co., Div. of Simpson Logging Co., Everett, Wash.
The Sorg Paper Co., Middletown, Ohio.
Southworth Paper Co., Front St., West Springfield, Mass.
Standard Packaging Corp (Eastern Fine Paper and Pulp Div.) Bangor, Me.
Strathmore Paper Co., Front St., W. Springfield, Mass.
S. D. Warren Co., 89 Broad, Boston 1.
Wausau Paper Mills, Brokaw, Wis.
Byron Weston Co., Main St., Dalton, Mass.
West Virginia Pulp & Paper Co., 230 Park Ave., N. Y.
White & Wyckoff Mfg. Co., Riverside, Holyoke, Mass.
Whiting Paper Co., Gatehouse Rd., Holyoke, Mass.
Whiting Plover Paper Co., Stevens Pt., Wis.

Writing Instruments

THE DEEDS and misdeeds of man throughout the ages could not have been recorded without the use of writing instruments. Our modern pens, pencils, and paper had their beginnings in the sticks and clay, hammer and stone, reed and papyrus, styli and wax used by cave men, Egyptian priests, and the monks of the Middle Ages.

Writing instruments slowly progressed from fingers to sticks to lumps of colored earth and chalk. The word, "pencil" comes from the small brush the Romans used to write their symbols on papyrus and which they called "penicillus," which means "little tail." The word, "pen," comes from the Latin term "penna," which means "feather."

As far back as 4,000 B.C., Egyptians used a fountain pen made of a hollow stem fitted on one end with a piece of copper very similar to the modern pen nib. Early Romans made their calamus or arundo from bamboo and reed, cutting the forward part into a nib and pouring writing fluid into the stem. A bronze pen point excavated from the ruins of Pompeii indicates that the Romans must have used the pen as well as the stylus. The seventh century ushered in the familiar quill pen, and the transition from quill to steel did not occur until the 17th Century.

English discovered graphite

The lead pencil started with thin rods of metallic lead or silver used for making a light mark. We have drawings called "silver point" from the 14th Century made with such a pencil. The earliest known description of a true lead pencil came from Conrad Gesner of Zurich in 1565 when he mentioned a writing rod held in an ornate wooden shaft.

It was during the reign of Queen Elizabeth in 1544 that graphite was discovered in Barrowdale, England. It was given the name "plumbago" which means, "that which acts like lead." When it was later proved to be a form of carbon rather than lead, it was given the name, "graphite," from the Greek word meaning "to write."

(*To page* 100)

TOOLS OF THE OFFICE

Hawkers stalked the streets of London during the reign of James I selling markers of black graphite. The history of pencils is still haunted by the rasping voices and hard-sell techniques of those first pencil salesmen crying:

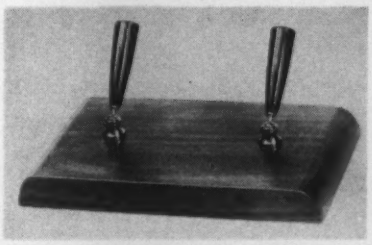
"Buy marking stones, marking stones buy,
Much profit in their use doth lie;
I've marking stones of colors red,
Passing good—or else black lead."

The first modern pencil form was actually not born until the latter part of the 18th Century when slender squares of graphite were glued between two strips of wood. Before that, the graphite was used in a rough chunk, then in sticks wrapped with string to protect the fingers. The string was unwound as the graphite wore down. Graphite pieces were also pushed into quills, into tubes, or held in metal holders called "port-crayons."

By the 17th Century, England was competing with Germany in pencil production, and when the Barrowdale mines were exhausted, Germany became the leader. In 1795, Napoleon, cut off from the English and Germans, commissioned Nicholas Conte, an artist, chemist, and mechanical genius, to develop a substitute for imported pencils. Conte succeeded in developing a process which forms the basis for present-day methods when he mixed powdered graphite, clay and waxes, and fired them like china in a kiln. His new method spread abroad and was soon adopted generally because of the superior writing which it produced.

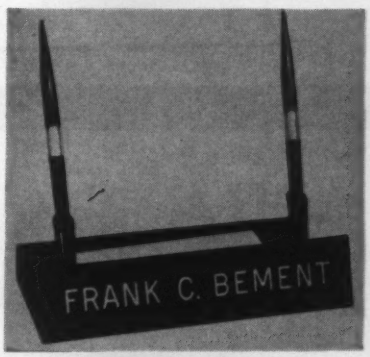
America had to depend upon pencils from Europe until well into the 19th Century. And although the first pencils in America were made by an unknown schoolgirl by crushing English graphite and stuffing it into a hollowed-out alder twig, the first pencils sold in any quantity were made by William Monroe of Concord, Massachusetts, in 1812. The United States now surpasses the rest of the world in pencil production.

Different types of pencils are used in different company departments. The executive, stenographic, clerical, accounting, engineering, production, advertising, sales, and shipping departments would all have need for different kind of pencils.



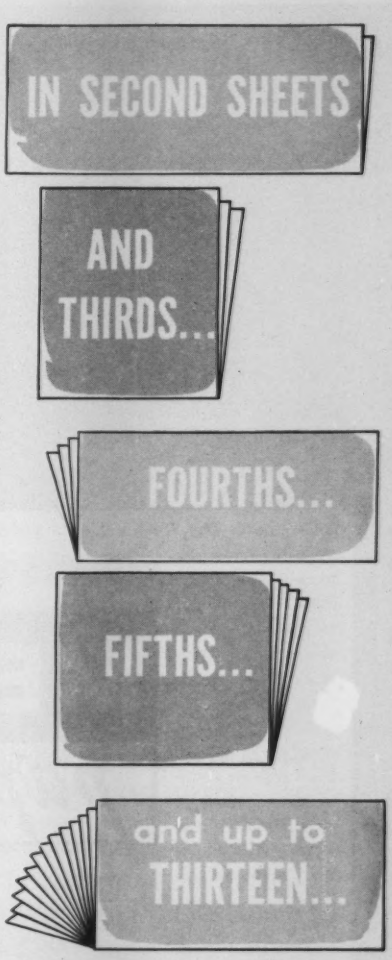
Hanover Pen Company's #102 double base model is made of hand-finished walnut.

Sheaffer's "PFM" (Pen For Men) has snorkel filling action, greater ink capacity.



Twin pen, desk name plate, and memo card holder comprise useful unit.

A slide gauge is built into this ball point pen from Designs Modern.



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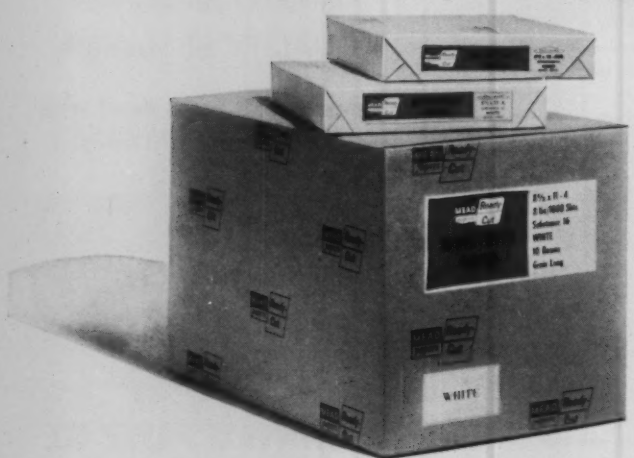

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- ***"Ready-Cut," Ready-to-Print!***

You get more from Mead in the new line of "Ready-Cut" papers for use with all small size offset reproduction and duplicating equipment. You can choose from a wide range of weights, colors and finishes in business papers, book, cover, index and bristol grades.

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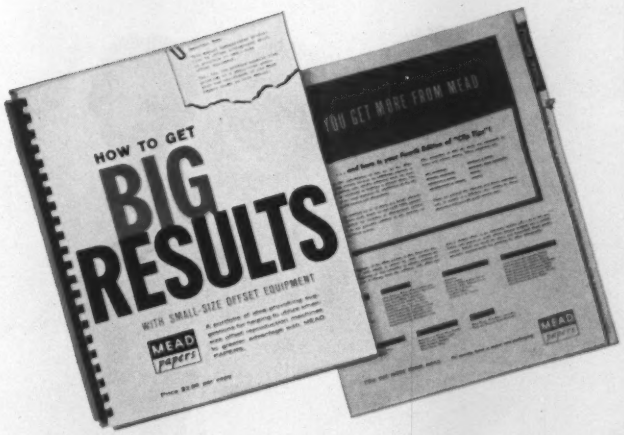

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Use Readers' Inquiry Coupon on Page 112

TOOLS OF THE OFFICE

Because the pencil is such a staple product, many users lose sight of its variability. Most people, however, do agree that a good pencil must have the properties of:

1. Smoothness. A good pencil produces a line of even density with a minimum of writing pressure. This is made possible by the use of high-quality graphite, clay and waxes; by the formula; and by the care and skill given to refining the mixture.

2. Strength. The point must resist breaking under normal writing conditions. The lead compounds must be thoroughly mixed to eliminate weak spots. The adhesion between the lead and the wood must be strong.

3. Durability. The better quality and better-refined lead will last longer between sharpenings because it wears away evenly and without excess writing pressure.

There are, literally, hundreds of pen designs available today. Although some are superior to others according to the individual differences of the different brands, their basic features are primarily the same. The principal parts of the modern pen are the reservoir, the filling mechanism; section; feed; nib; and cap.

Venus color lead erases as cleanly as black lead markings.

Semi-Hex ball pen is recommended for use on material to be photocopied.

The principle of the ball point is simple, but getting a poorly made ball point pen to work is another matter indeed. The low cost of the ball point is apt to belie the extreme accuracy necessary in its manufacture.

A tiny ball of steel, varying slightly in size among models but usually one millimeter in diameter, is wedged into a socket. The socket is connected by channels to the ink supply. The ball must revolve freely in the socket and yet be tight enough to keep back excess ink. As it is dragged across any surface, friction causes it to turn, wiping ink from the channels and depositing it on the surface.

The enormous amount of competition in the writing instrument industry has brought about a number of diabolically ingenious tests for endurance and durability. Through television, company dem-

WE ASKED THESE

Use Readers' Inquiry Coupon on Page 112

onstrations, and other media, the public eye has witnessed the undeniable challenge of pens and pencils operating underwater, through outer space, in the dark, and through butter.

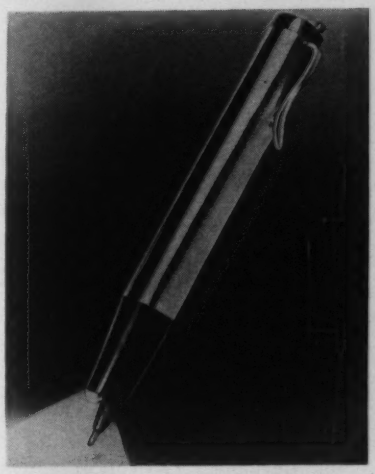
One cannot help but be impressed by the constant attempts of manufacturers to improve their products in this field. One company suggests that the "genderizing" of top quality writing instruments has strengthened their competitive position if not in the office market, at least in the gift industry. Recently introduced writing instruments are now being created exclusively for men or for women. The psychological impact of this "his" and "hers" effect being incorporated into pens and pencils may be considered either good or bad depending on where they are used, in the home or in the office.

For although writing instrument genderization is an asset in the home as it serves to intensify the waning difference between the sexes and helps to re-establish that somewhat lost polarity — in business, where so many of America's women have so much to contend with already in their valiant struggle for masculine acceptance — and wages — it seems unfair to add a condescending ruffle to the very pen they write with.

Office decor has also had its effect upon the manufacturers of pens and pencils. Desk accessories have become an integral part of the overall design. Pen desk sets available in a variety of colors and a series of materials are now widely used. Morale-building features such as an individual name and address printed under the cap of one's personal ball-point pen are also coming into their own. The combination desk-name plate with the twin pen set provides another boost to the executive ego.

Pen, pencil combined

The pen and pencil have also been "interbred" in order to create an entirely new species of writing instrument. According to Venus Pen & Pencil Corp., the "crossing" of the pen and pencil has done much to change writing habits in both business and industry.



Flashlight batteries within the Scriba-Lux provide light for writing in the dark.

Many ball point pens have lighting attachments which enable one to write in the darkness or under poor lighting conditions. It is said that the ball-point pen with the light can be carried about constantly like any normal ball-point pen, in spite of battery weight, and is especially suitable for police, customs officers, campers, and businessmen.

CHARMING GIRLS:

What famous papers work better for you... and help you do better work for your bosses ?

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TOOLS OF THE OFFICE

According to Hanover Pen Co., the ball-point pen has taken a rather ambivalent trend; although there is an ever-increasing demand for low-priced disposables and refillable pens, many discriminating buyers have switched to higher priced ball pens which give better service for a longer period of time.

There have been many interesting conjectures about the writing instrument of the future. There is said to be a writing instrument being developed right now which will depend upon no other operational means but the rays of the sun; and there is another which is described as a mere stick, chemically processed to liquefy upon contact with the human body. It would appear that in the world of writing instruments, one needn't be surprised at anything.

The Manufacturers

Acro Laboratories, Inc., 41 Buena Vista Ave., Yonkers, N. Y.
Advance Crayon & Color Corp., 136 Middleton St., Brooklyn, N. Y.
Aljac Corp., 240 West 72nd St., New York.
All-Rite Pen Co., Inc., 241 Hudson St., Hackensack, N. J.
American Crayon Co., 1706 Hayes Ave., Sandusky, Ohio.
R. L. Arnold Pen Co., Inc., P.O. Box 150, Petersburg, Va.
Autopoint Co., 3200 West Peterson Ave., Chicago.
Bankers & Merchants, Inc., 3229 North Sheffield, Chicago.
Richard Best Pencil Co., 211 Mountain Ave., Springfield, N. J.
Benard Sales Co., New York.
Binney & Smith, Inc., New York.
Blaisdell Pencil Co., Philmont Rd., at Huntingdon Pike, Bethayres, Pa.
C.D.G. Fount-O-Ink Co., 3501-11 Eagle Rock Blvd., Los Angeles.
Changepoint, Inc., 544 South Rockford, Tulsa, Okla.
Connecticut Pencil Co., 541 Maple St., Bridgeport, Conn.
A. T. Cross Pencil Co., 53 Warren St., Providence, R. I.
Cushman & Denison Mfg. Co., 730 Garden St., Carlstadt, N. J.
Joseph Dixon Crucible Co., 167 Wayne St., Jersey City, N. J.
Eagle Pencil Co., Danbury, Conn.
Eberhard Faber Pencil Co., Crestwood, Wilkes-Barre, Pa.
Empire Pencil Co., Div. of Hasenfeld Bros., Inc., Shelbyville, Tenn.
Essex Corp., Div. of Venus Pen & Pencil Co., Hoboken, N. J.
Esterbrook Pen Mfg. Co., Delaware Ave. & Cooper St., Camden, N. J.
Everlast Products, Inc., 644 Broadway, New York.
Eversharp Pen Co., Arl'ton Hgts, Ill.
A. W. Faber-Castell Pencil Co., Inc., 41 Dickerson St., Newark, N. J.
Ferber Pen Corp., 99 West Sheffield Ave., Englewood, N. J.
Fisher Pen Co., 7333 West Harrison St., Forest Park, Ill.
Flo-Ball Pen Corp., 455 Douglas, Holland, Mich.
Frankel Carbon & Ribbon Co., 285 Rio Grande Blvd., Denver, Colo.
General Pencil Co., 67 Fleet St., Jersey City, N. J.
Hanover Pen Co., Hanover, Pa.
Hassenfeld Bros., Inc., 1033 Broad St., Pawtucket, R. I.
C. Howard Hunt Pen Co., 7th & State St., Camden, N. J.

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TOOLS OF THE OFFICE

David Kahn, Inc., Paterson Plank Road, N. Bergen, N. J.

Koh-I-Noor Pencil Co., Bloomsbury, N. J.

Linton Pencil Co., Lewisburg, Tenn.

Listo Pencil Corp., 1925 Union St., Alameda, Calif.

The Mallard Pencil Co., Inc., Bourbon St. & Chambers Ave., Georgetown, Ky.

Marsh Stencil Machine Co., 100 Marsh Bldg., Belleville, Ill.

McLennon Pen Co., 220 South State St., Chicago.

Micropoint Co., 624 E. Taylor St., Sunnyvale, Calif.

Bert M. Morris Co., 8615 West 3rd St., Los Angeles.

Musgrave Pencil Co., Shelbyville, Tenn.

National Pencil Co., Box 224, Shelbyville, Tenn.

New Diamond Point Pen Co., 236 Fifth Ave., New York.

Nichols Products Co., 325 West Main St., Moorestown, N. J.

Non-Stop Pen & Pencil Co., 112-19 14th Rd., College Point, N. Y.

Norma Pencil Corp., 137 West 14th St., New York.

Paper Mate Co., Inc., 444 Merchandise Mart., Chicago.

Parker Pen Co., Court and Division Sts., Janesville, Wis.

Pencil-Craft Sales Co., 500 Willow Ave., Hoboken, N. J.

Peter Pepper Products, P.O. Box 1003, Palos Verdes Estates, Calif.

Pryor Marking Products, 434 South Wabash Ave., Chicago.

Quik-Flo Mfg. Corp., P.O. Box 2, Avenal, N. J.

Regal & Wade Mfg., 58-16 57th Rd., Maspeth, N. Y.

Reliance Pen & Pencil Corp., 22-28 South Sixth Ave., Mt. Vernon, N. Y.

Ritepoint Pen & Pencil Co., 9400 Watson Road, St. Louis.

Scripto, Inc., 423 Houston N.E., Atlanta, Ga.

Sempa, Inc., 320 Fifth Ave., New York.

Sengbusch Self-Closing Inkstand Co., 2222 West Clybourn St., Milwaukee, Wis.

W. A. Sheaffer Pen Co., 311 Ave. H, Ft. Madison, Ia.

Speedry Products, Inc., 91-31 121st St., Richmond Hill, N. Y.

J. S. Staedtler, Inc., 25 Dicarolis Court, Hackensack, N. J.

Sterling Plastics Co., 1140 Commerce Ave., Union, N. J.

Samuel Taubman & Co., 176 Madison Ave., New York.

Tru-Tip Writing Instrument Corp.. 153-09 10th Ave., Whitestone, N. Y.

Tuckersharpe Pen Co., Inc., 3808 Jefferson Davis Highway, Richmond, Va.

Union Pencil Co., 1271 Ludlow St., Yonkers, N. Y.

United States Pencil Co., 100 Fifth Ave., New York.

Universal Fountain Pen & Pencil Co., Inc., 808 Driggs Ave., Brooklyn 11, N. Y.

Walbuck Crayon Co., Off Railroad St., Andover Mass.

Venus Pen & Pencil Co., 500 Willow Ave., Hoboken, N. J.

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Wallace Pencil Co., Maplewood Post Office, St. Louis.
Waterman-Bic Pen Co., Inc., 1 Waterman Pl., Seymour, Conn.
Windsor Pen Corp., 111 West 19th St., New York.

Typewriters

The fundamental purpose of the typewriter is to enable the typist, or operator, to do more and better work with less effort in a given time than can be done with the pen, and the value of the typewriter is measured by the extent to which it increases speed and legibility in making records or preparing messages for delivery.

Today, the typewriter not only continues to serve its basic function, which is printing neat, clear copy; it has also become one of the most important parts of any highly automated office system.

It is used as a systems machine in accounting, a substitute machine for the expensive typesetting equipment used to prepare printed copy for magazines and books, and a "point of origin" machine for entering information into integrated data processing systems.

Entire keyboard of Adler electric typewriter, distributed by Addo-X, can be adjusted for training secretaries.

Cole Steel's 1960 portable typewriter offers three type styles, matching case.

Numerous refinements and features have been added to the typewriter so that its traditional abilities and functions have been increased. Some of these refinements include horizontal and vertical halfspacing, simplified setting of margins and tabulation stops, the addition of special keys, and, of course, electrification of machines.

Several basic types of office typewriters have been on the market for quite some time. These include noiseless machines, machines using carbon ribbons to produce copy of exceptional clarity, long carriage machines intended for statistical work, and electric machines.

Besides regular electric models, semi-electrics are available. One has an electric keyboard; manual carriage return; another has a manual keyboard with an electrified carriage return.

(*To Page* 107)

Secretaries never die...

They just stay young indefinitely*—that is, if they use Kee Lox Grip-N-Pull carbon paper. Ask any girl who is already using it (and note how fresh and vivacious she looks—even at quitting time). She'll tell you what nice copies she gets, how clean they are. And she'll be equally enthusiastic over Grip-N-Pull's other features—automatic warning of last typing lines, automatic rotation, automatic alignment.

You too can stay young indefinitely* by letting Grip-N-Pull carbon paper make your work easier and pleasanter. And your boss will be interested in knowing that Grip-N-Pull, with all its advantages and long wear, still costs no more than regular carbon paper which does not have the exclusive patented features of Grip-N-Pull.

**The only exaggeration (one we hope will cause a smile) in this message.*

All carbons are removed quickly in one clean operation, using uncoated edge. Clean hands, clean work, clean desk.

Lower right of uncoated edge is die cut to tell how much space is left at bottom of sheet.

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"OKAY, a dictating machine sounds like a great idea . . . *but which one?*"

WITH so many makes and types of equipment on the market, it's not hard to get confused. A smart move is to look over Edison Voicewriter's *complete* line of quality machines—there's one that's ideal for each particular dictation requirement in your organization.

Best of all—with Edison Voicewriter, you deal with a single nation-wide service staff . . . one with over 70 years' experience in business dictation!

For your executives and "volume" correspondents . . . Voicewriter!

The Voicewriter offers every convenience for the busy executive or correspondent. Lets them "talk away" their work just by taking the mike. The Edison Voicewriter Diamond Disc is easy to handle—easy to transcribe from.

For your "occasional" correspondents . . . Televoice!

Televoice is ideal for companies where many individuals require dictating facilities. Connects each one to a central transcribing point through a handy dictating phone. Work gets out faster, much more economically.

For your man on the go . . . Midgetape!

You can use the palm size Midgetape recorder for so many jobs! To record conversations . . . for verbal note taking . . . as a sales training tool! Battery operated. Only 3 lbs. light. Completely portable. Use it anywhere!

A complete line of accessories—telephone recorders, conference units, carrying cases and so on—is available to "tailor" Edison equipment to your particular requirements.

Mail coupon today for details on the Voicewriter equipment to match all your dictation needs. No obligation, of course.

OM-5

To: Edison Voicewriter, West Orange, New Jersey

Okay, I'm interested! What do you think Voicewriter can do for me and my organization?

Name_____

Organization_____

Street_____

City_____ Zone_____ State_____

Edison Voicewriter

A product of Thomas A. Edison Industries. McGraw-Edison Company, West Orange, N.J. In Canada: 32 Front Street W., Toronto, Ont.

McGRAW EDISON

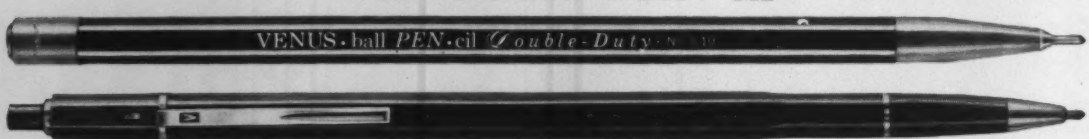
©1960 VENUS PEN & PENCIL CORPORATION, LEWISBURG, TENN. *PAT. NO. 2,678,634

New Camel ink-cartridge* goes miles further without running dry!

Because Venus can put more ink in the remarkable Camel ink-cartridge, you get more work out. For just pennies more, the famous "cross between the pen and pencil"® gives you top efficiency, top economy for the office. Other features: New cone-shaped extended point; light wood barrel; permanent ink. Nine styles. 29¢, 39¢, 49¢. Less by the dozen. Blue, black, red, green ink. Order from your stationer today. **VENUS ball *PEN*·cil**

FREE DESK STAND

(50¢ retail) with every dozen retailing for 39¢ or more. Limited time offer through your stationer.



Venus "365"*... the de luxe retractable model. Guaranteed to write 1 year or new refill free. $1.29.

Use Readers' Inquiry Coupon on Page 112

TOOLS OF THE OFFICE

(*From Page* 104)

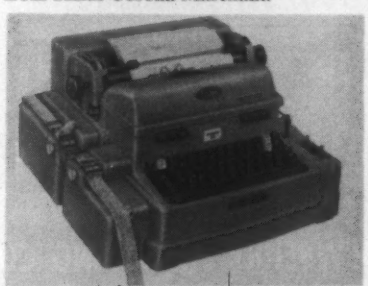
There are many other machines which have intriguing and practical modifications. One is designed to be used in the preparation of bar graphs and has keys with appropriate designs. Another has embossed codes, resembling Braille for the use of the blind, and still another variety of the standard machine is one intended for the use of one-armed typists. The latter eliminates common two-hand steps such as typing single capitals.

Other variations have come about in the design of portable machines. An electric portable has been introduced—although it is not fully electrified since it does have a manual carriage return. Another portable features the cartridge approach in changing ribbons. The ribbon is encased in two plastic containers similar to small film magazines and, with the use of these, ribbons can be changed without being touched by hand. Some standard machines also have this feature.

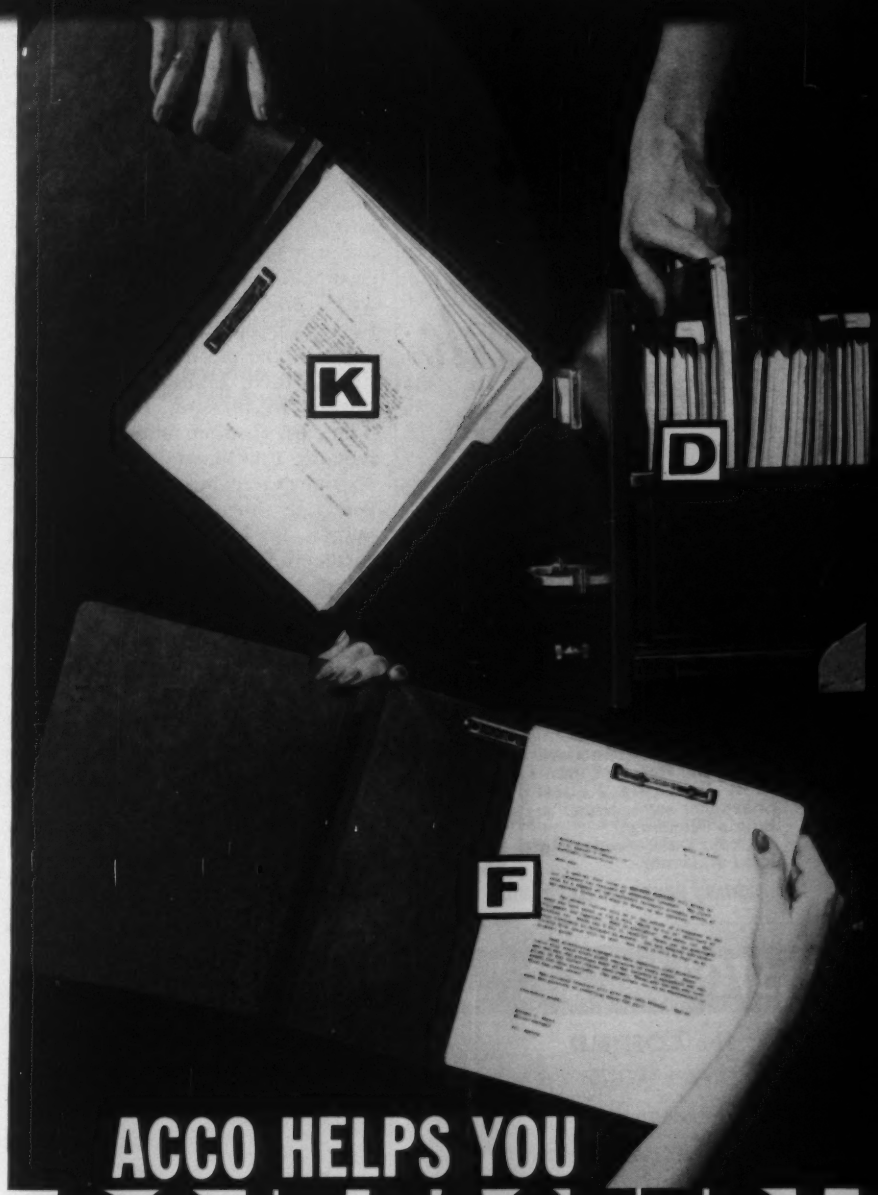
Interchangeable type is now available for some models. With this feature the operator can very easily change the keyboard to permit the printing of additional symbols and characters needed in specialized work.

One of the very significant advances which has come about is concerned with tabulation. There is now a feature on some machines

Electric office typewriters are available from Smith-Corona Marchant.



The Friden Flexowriter automatically writes letters from punched paper tape.



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Keeps papers spillproof, secure, in place. Saves re-filing. Speeds finding. Ends "missing paper" panic. Durable, genuine pressboard folders are trim, firm, sag-proof. Save finding time—and drawer space. Fast transfers—old file slides out, new fastener slides in!

ASK FOR ACCO's new booklet "Ideas That Save Time and Space" —available free at office outfitters.

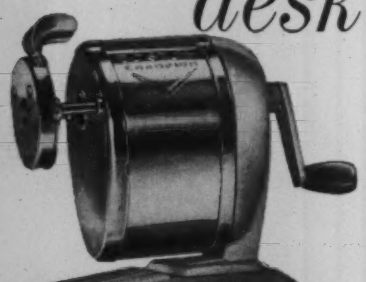
Or write: ACCO PRODUCTS, A Division of Natser Corporation, Ogdensburg, N.Y. - In Canada: Acco Canadian Co., Ltd., Toronto

ACCOBIND®

GENUINE PRESSBOARD FOLDERS

® REGD. T.M.

ONCE UPON A WALL
—now one upon a desk



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Portable—in 4 colors:

Right in step with modern offices the Boston Champion Portable Pencil Sharpener saves time . . . builds efficiency.
Order today from your local stationer.

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Green
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Gray

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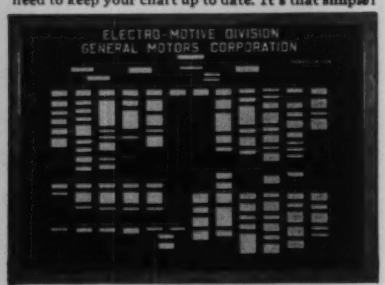
STOP COSTLY RE-DRAFTING OF ORGANIZATION CHARTS

The COFFIELD EVERLASTING *Interchangeable* ORGANIZATION CHART

EASY TO CHANGE

A typist, a typewriter and typing paper are all you need to keep your chart up to date. It's that simple!



- Sizes to Fit Any Organization Structure
- Eliminates All Costly Drafting
- Photographs for Sharp Prints
- Invaluable as a Visual Training Aid
- All Parts Are Movable and Re-usable
- Solves Your Chart Problem Forever

Write for Free 16-Page Illustrated Brochure with Price Schedule No. OM-5

MANAGEMENT CONTROL CHARTS CO.
1731 N. WELLS ST. CHICAGO 14, ILL.

TOOLS OF THE OFFICE

which allows a typewriter's tabulating mechanism to sense metallic ink printed on business forms. Forms used with this feature are printed with vertical lines of metallic ink at the left of each box on a fill-in form.

When the electronic sensing feature is used, tabulation is accomplished by pressing a special key. The carriage then moves until the metallic ink lines are sensed by a special device, and it stops just beyond the line. The typist at this point can make her entry without further tabulation or spacing.

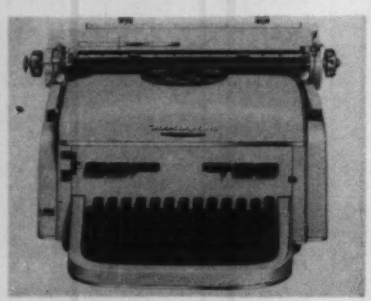
Typewriters read codes

One of the most important modifications to the typewriter in recent years has been the addition of devices which enable it to read and/or punch a code on paper tape carrying the same information appearing on the typed copy. This by-product coded information can be read in turn by other typewriters, by communications equipment, and by tape-to-card punches.

Because punched paper tape is one of the basic "common languages" for integrated data processing, the typewriter has become a fundamental instrument for introducing data into an integrated system.

Similar codes may be punched into the edge of a card, and some typewriters are capable of both punching and reading such cards. Some typewriters used in integrated

Olivetti T2PN Printing Reperforator produces printed message on punched tape.



Interchangeable type makes this Remington Statesman a flexible instrument.

Underwood has a complete line of portable, standard, electric machines.

Inter-Continental Trading Corporation's Olympic manual office typewriter features interchangeable carriages.

FREE GENUINE ENGRAVED LETTERHEADS
DIES AND PROOFS
$15.00 FOR 1000
Genuine ENGRAVED BUSINESS CARDS
500 $11 • 1000 $15
BUSINESS ANNOUNCEMENTS 500 ONLY $28
MEMBER OF BIRMINGHAM CHAMBER OF COMMERCE—BETTER BUSINESS BUREAU
World's Largest Engraver
DEWBERRY ENGRAVING CO.
3201 - 4TH AVE., SO. - BIRMINGHAM, ALABAMA

Use Readers' Inquiry Coupon on Page 112

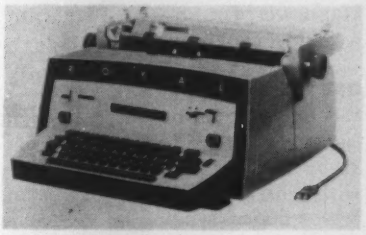
data processing systems can encode material directly on magnetic tape that is used in electronic computers, and still others can print out the results of data processing from computers and from measuring equipment used in manufacturing processes.

Thus, the typewriter is still indispensable, even to the highly automated office which may use the most elaborate computer system, though historically it is one of the oldest office machines.

The Manufacturers

Addo-X, Inc., 300 Park Ave., N. Y.
R. C. Allen Business Machines, Inc., 678 Front Ave. N.W., Grand Rapids, Mich.
Alma Office Machine Corp., 349 Broadway, New York.
Alpina U.S. Distributors, 257 S. LaBrea Ave., Inglewood, Calif.
American Automatic Typewriter Co., 2323 North Pulaski Road, Chicago.
American Business Machines, Inc., 573 Broadway, New York.
American Dictating Machine Co., Inc., 51 West 45th St., New York.
American International Office Equipment Co., 7940 West Third St., Los Angeles.

Consul standard typewriter has 12-inch carriage, horizontal half spacing.



Power roll on Royal electric office typewriter is made of case-hardened steel.

American Voss Corp., 18097 Sorrento Ave., Detroit.
Cole Steel Equipment Co., Inc., 415 Madison Ave., New York.
Commercial Controls Corp., 1 Leighton Ave., Rochester, New York.
Continental Office Machines, Inc., 500 Fifth Ave., New York.
DeJur-Amsco, 45-01 Northern Blvd., Long Island City, New York.
Facit, Inc., 404 Park Ave. South, New York.
Friden, Inc., San Leandro, Calif.
Industrial Molded Products Co., Inc., 609 New York Bldg., St. Paul, Minn.
Inter-continental Trading Corp., 90 West St., New York.
International Business Machines Corp., 590 Madison Ave., N. Y.
Olivetti Corp. of America, 580 Fifth Ave., New York.
Remington Rand, Div. of Sperry Rand Corp., 315 Park Ave. South, New York.
Robinco New York, Inc., 5 East 17th St., New York.
Robotyper Corp., 125 Allen St., Hendersonville, North Carolina.
Royal McBee Corp., Westchester Ave., Port Chester, New York.
Smith-Corona Marchant, Inc., 701 E. Washington St., Syracuse, New York.
Underwood Corp., 1 Park Ave., New York.
Vari-Type Corp., 720 Frelinghuysen Ave., Newark, New Jersey.

IRS Cracks Down!

Expense Allowances must be fully detailed in '60

Weekly & Monthly Books, Weekly Sheets

Beach's Common Sense Expense Books

BEACH'S will serve you BEST

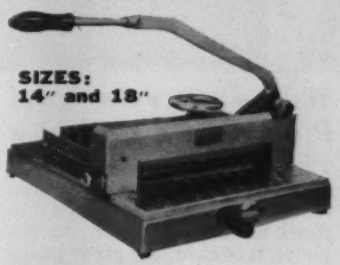
Here are the most Complete — Sturdy — Easy to Use expense books! On-the-spot entries of exact amount and "when, where, what for," keep you SAFE.

Sales Leader in U.S.
At Stationers, or Write

BEACH PUBLISHING CO.
19829 W. McNichols Rd., Detroit 19, Mich.

NO OTHER PAPER CUTTER BUILT SO WELL TO SELL SO LOW

'Triumph'
the precision Paper Cutter



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For every business: Banks, hospitals, insurance companies, industrial organizations with duplicating departments, stationers, photo finishers, small printers, lettershops, mimeograph, offset shops, advertising agencies, schools and colleges.

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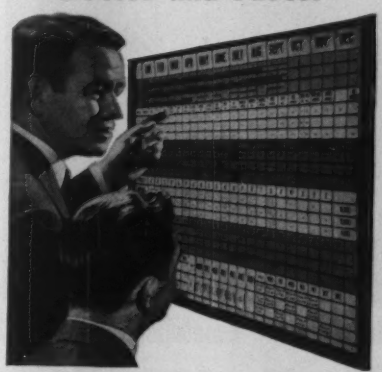
145 West 45th Street, New York 36, N.Y.

How To Get Things Done Better and Faster



BOARDMASTER VISUAL CONTROL

☆ Gives Graphic Picture—Saves Time, Saves Money, Prevents Errors
☆ Simple to operate — Type or Write on Cards, Snap in Grooves
☆ Ideal for Production, Traffic, Inventory, Scheduling, Sales, Etc.
☆ Made of Metal. Compact and Attractive. Over 500,000 in Use

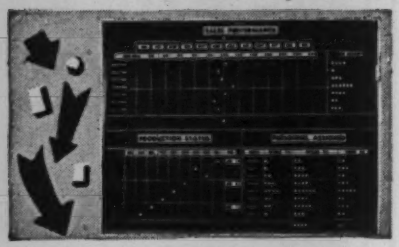
Full price **$49.50** with cards

FREE 24-PAGE BOOKLET NO. G-100 Without Obligation

Write for Your Copy Today
GRAPHIC SYSTEMS
Yanceyville, North Carolina

Use Readers' Inquiry Coupon on Page 112

magnetic
Visual Control Systems



Make Cards and Pegs Obsolete

Time and motion studies prove that the "Maggie" board offers the quickest and easiest way to chart sales, production, inventories, traffic, or any other phase of your business. At a glance you know what is happening.

Permanent colored magnetic indicators that can be moved with finger-tip ease—and stay put—make cards, pegs, and other nuisance devices obsolete. The first cost is the last cost. **Packaged kits begin at $49.50.**

For information on the most modern and advanced board available today, write to:

MAVCO maggie magnetic visual aids corp.
19 West 32nd Street, New York 1, N. Y.

Use EAC Quality Cards

for Efficient, Economical Processing

Write . . . wire . . . or phone for fast delivery of stock cards. Our inventory is maintained to assure shipment same day order is received. EAC guaranteed quality and service eliminates down time in your data processing operation.

EAC ELECTRONIC ACCOUNTING CARD CORP.

Electronic Accounting Card Corporation
P. O. Box 1088 High Point, N. C

Please send me price list and samples

Name_____

Address_____

YOURS FOR THE ASKING

SHIPPING AND WAREHOUSING EFFICIENCY

Time- and money-saving tips on general administration, packing, shipping, packaging, warehousing, and public warehousing are contained in the brochure "100 Ways to Save Money in Packing, Shipping and Stockroom Operations." Manpower, Inc., 820 N. Plankinton Ave., Milwaukee 1, Wisc.

OFFICE LAYOUT KIT

A new office layout kit, scaled one-eighth inch to a foot, consists of a 20- by 50-inch plastic planning board with grid, marking pencil, tape, and representative symbols for every type of office furniture and equipment (48 different size templates, more than 1,200 pieces). Descriptive literature with a free sample and directions for use are available from Planoramics, Inc., 35 E. First St., Boston 27, Mass.

SYSTEMATIC PURCHASING CONCEPT

"Productive Purchasing," a 22-page booklet available from General Electric Company, Schenectady 5, N. Y., provides a detailed approach to the appraisal of product value in business purchasing. Especially valuable is the checklist for evaluating equipment suppliers.

RATE YOUR BUSINESS

Five areas of business progress—organization, product research, production, distribution, and control—are evaluated in the free chart entitled "The Success of Any Business Depends Upon Sound and Progressive Management." Wolf Management Engineering Company, 7 S. Dearborn St., Chicago 3, Ill.

CORRESPONDENCE IMPROVEMENT

"Sixty Best Business Letters," a valuable reference source for both the secretary and the business man, answers many correspondence problems. Actual samples of 1959's 60 best letters are drawn from manufacturers, retailers, and financial institutions. American Automatic Typewriter Co., 2323 N. Pulaski Rd., Chicago 39, Ill.

CLASSIFIED ADVERTISING

Rates: Minimum 20 words $7.00. Each additional word 35c. Payable in advance. Address replies to all Box Number ads c/o OFFICE MANAGEMENT and AMERICAN BUSINESS, 212 5th Ave., New York 10, N. Y.

For Sale or to Buy

SALE: N. C. R. ANALYSIS AND distributor machine Model 23015 (152) 168RT 4 years old. General Telephone and Electronics Laboratories, Bayside 60, New York. Attention: J. C. Stepina.

PITNEY BOWES POSTAGE METER. "AV" model, perfect, like-new condition, used very little. Only $1200.000. Ideals Publishing Co., 3510 W. St. Paul Avenue, Milwaukee 1, Wis.

FOR SALE: NATIONAL CASH Register Analysis Machine. Class 41, 19 keys. For any type analysis. Numerical description of machine: 41-7-18-10-0 (A)TT-ST, gray, 14283-G. Machine in perfect condition. Serviced under NCR Contract. Will accept best offer, F.O.B. Seitz Packing Company, Box 347, St. Joseph, Mo.

FOR SALE: AUTOTYPIST, Practically new, Dual Selector Model 5060. and Perforator. Cost $2300.00. Uarco Burster, Model 617, and Deleaver, Model 711. Both new, combined cost $1400.00. Will accept best offer. Ship 'N Shore, Inc., Upland, Pa.

SALE: FACTORY DEMONSTRATOR ELECTRIC 2-in-1 Folding and Letter-opener Machine fully guaranteed. Originally $432.50, yours for $198.50. Lansdale Products, Box 568, Lansdale, Pa.

FOR SALE: BURROUGHS SENSIMATIC Bookkeeping Machine Series 300 and Cummins Perforator Model 321. Machines in excellent condition. Aluminum Shapes, 9000 River Road, Delair, N. J.

FOR SALE: 85 NATIONAL and Post Heavy Duty 11 x 17 Black Binders Catalog #9588½ and #257-65. Good condition. Make offer. Office Manager, New Idea Division, AVCO Corporation, Coldwater, Ohio.

CATALOGS, Booklets

Data Processing System C1

Computer Dept., General Electric Co., Phoenix, Arizona. Brochure CPB-81P describes the company's GE 210 electronic data processing system employing magnetic character recognition. The 12-page, three-color publication depicts the GE 210 and its capacity to handle data-processing requirements in areas of banking, utility billing, etc.

Business Letters C2

The American Automatic Typewriter Co., 2323 N. Pulaski Rd., Chicago 39. "60 Best Business Letters" is a booklet containing a collection of business letters illustrating: answers to inquiries; "thank you" notes; adjustments; collection requests, etc. Also shown is the company's 1960 line of automatic letter typing machines.

Photocopying Equipment C3

Ampto, Inc., Newton, N. J. A 24-page illustrated catalog describes company's line of photocopying products. Ten transfer photocopying machines and transfer processors of various types are depicted as well as transfer papers and films, photocopy chemicals, and accessories. A price list is included.

Steel Office Furniture C4

Western Mfg. Co., Aurora, Ill. A new, fully illustrated catalog displays the company's entire line of steel office furniture: desks, file cabinets, tables, bookcases, credenzas, etc. Several new products are also introduced. Specifications and construction features for each product are included.

Mailing Equipment C5

Pitney-Bowes, Inc., 2965 Crosby St., Stamford, Conn. An illustrated booklet describes the company's folding and inserting machines and their various applications in the office. Case studies are also included.

Photocopier C6

A. B. Dick Co., 5700 West Touhy Ave., Chicago 48. A full-color brochure depicts the company's Model 110 Photocopier. Features of the machine are outlined along with step-by-step operating procedure. A convenient feature of the 110 Photocopier is the flat bed exposure section which accommodates the bound pages of books and magazines.

There's nothing like a Graypoint to sooth a secretary's temper, to smooth away annoying errors, to save typing time.

Typists appreciate wood-cased Graypoint Erasers, made like a pencil, comfortable and convenient to hold, like a pencil. Sharpen in a pencil sharpener or with a knife, like a pencil—to a point that picks-out typing errors cleanest, fastest. Graypoints won't roll off typists desks.

Graypoint luxury gray rubber erases letters and words so easily that girls get a thrill out of these superb erasers just as soon as they use them. Quite likely, *you'll* never notice the erasures. Multiply the time each girl saves by the number of typists in your office and you'll see substantial reduction of overhead. Give your girls Weldon Roberts Graypoints.

Order from your stationer

WELDON ROBERTS RUBBER CO.
365 Sixth Avenue Newark 7, N. J.

World's Foremost Eraser Specialists

Weldon Roberts Erasers
Correct Mistakes in Any Language

Use Readers' Inquiry Coupon on Page 112

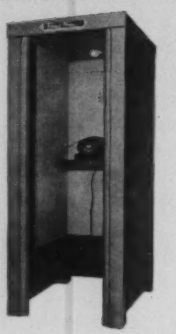
...be heard there!

Place phones where you need them — with Acousti-Booths, noises won't interfere with conversations. Noises are absorbed before they can interfere with hearing and speech.

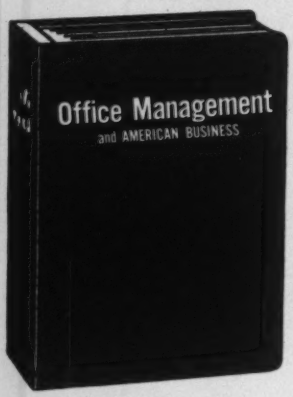
There is a model suitable for every location. And as always — the *acoustical performance is guaranteed.*

For model descriptions and prices, write for Bulletin No. A-142-4N.

BURGESS-MANNING COMPANY
Architectural Products Division
749 East Park, Libertyville, Ill.



HANDY BINDER FOR OFFICE MANAGEMENT and AMERICAN BUSINESS



Protect your copies of OFFICE MANAGEMENT and AMERICAN BUSINESS with these modern Vulcan Binders! Each binder holds six monthly issues. Binders are made of heavy-weight board and are covered with dark blue, drill quality, imitation leather stamped in gold foil as illustrated. Backbone panel gives space for labeling volume and year. Individual wires hold each issue securely, make insertion easy.

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Enclose check with order

OFFICE MANAGEMENT and AMERICAN BUSINESS
The Magazine of Administration and Systems
212 Fifth Avenue New York 10, New York

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May, 1960

Circle respective item numbers.

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2	9	15	C 2
3	10	16	C 3
4	11	17	C 4
5	12	18	C 5
6	13	19	C 6
7			

Name.....

Title.....

Company.....

Address.....

City.....Zone.....State.....

Number of Office Employees (all departments).....

OFFICE MANAGEMENT and AMERICAN BUSINESS
212 Fifth Ave., N. Y. 10, N. Y.

•

May 1960 issue
This inquiry form good Until June 15, 1960

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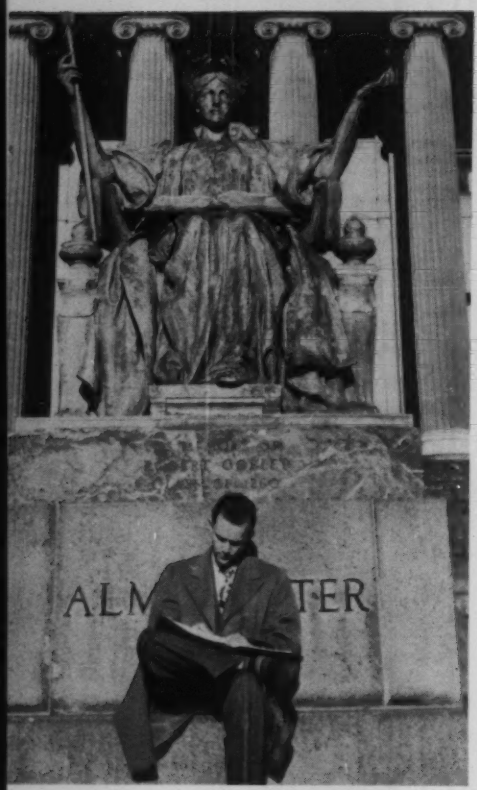
Editorial

NMAA RECOMMENDS CURRICULUM STANDARDS



THE National Machine Accountants Association recently sponsored a meeting in Chicago, which could be profitably copied by other membership associations. The NMAA believes that the entire field of data processing has grown so fast, and has drawn its recruits from so many sources, that no one has yet worked out a good basic curriculum for technicians in the field. The NMAA, therefore, created a committee, not of its own members, but of interested outside individuals to attempt to meet this need.

The committee, composed of educators, businessmen, and observers and commentators expert in the field, met for two days at the end of January. In that short space of time, the group worked out a hopeful set of specific qualifications which it feels should be met by anyone who is going to become completely competent in this vast and challenging new field. Eventual hope of the association is to create a certificate, which anyone meeting the stiff specifications could earn as a badge and indication of his qualifications for a responsible role in a data processing installation. A few of the significant criteria established for the certificate courses are interesting as an indication of the increased breadth of the American business outlook, and the vision of this particular advisory group.

"1. The intention of providing a Data Processing Certificate is to present a guide for a broad educational background and understanding in the data processing field.

"3. The program should be such as to force the student to go into areas he would not go into otherwise. It is only in this way that his mental horizon regarding data processing can be extended.

"5. The program is not intended to take the place of any standard college or university degree program. At the same time, each course should or could be a standard university of college course with a solid body of content.

"7. Two of the most important requirements of the program are a command of the English language (or whatever other language is native to the country) and an understanding of mathematical principles and techniques.

"11. The program as a whole must also reflect that broad knowledge and understanding of himself, others, work, and equipment which is an essential attribute of those who look forward to continued success and promotions, either within their own company or in the profession of data processing."

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